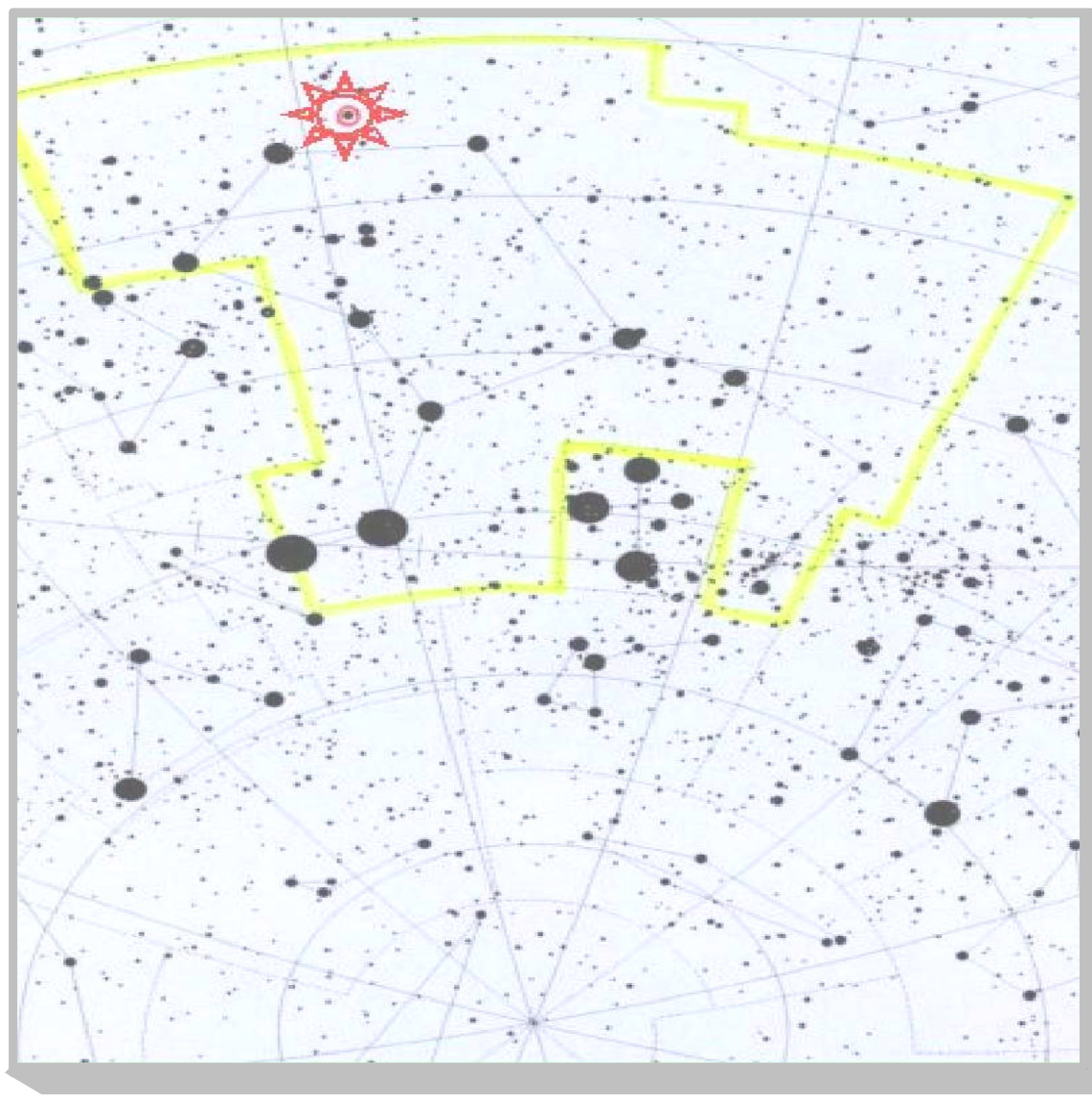
Service Note (Basic support information)

Nemio (model SSA-550A)



Revision Record

REV	DATE	REASON / AUTHOR	PAGE CHANGED	SER NO.	REMARKS
Initial	20-May	/ M. Tateno F3 Nasu			V3.0

Service Note (Basic support information)

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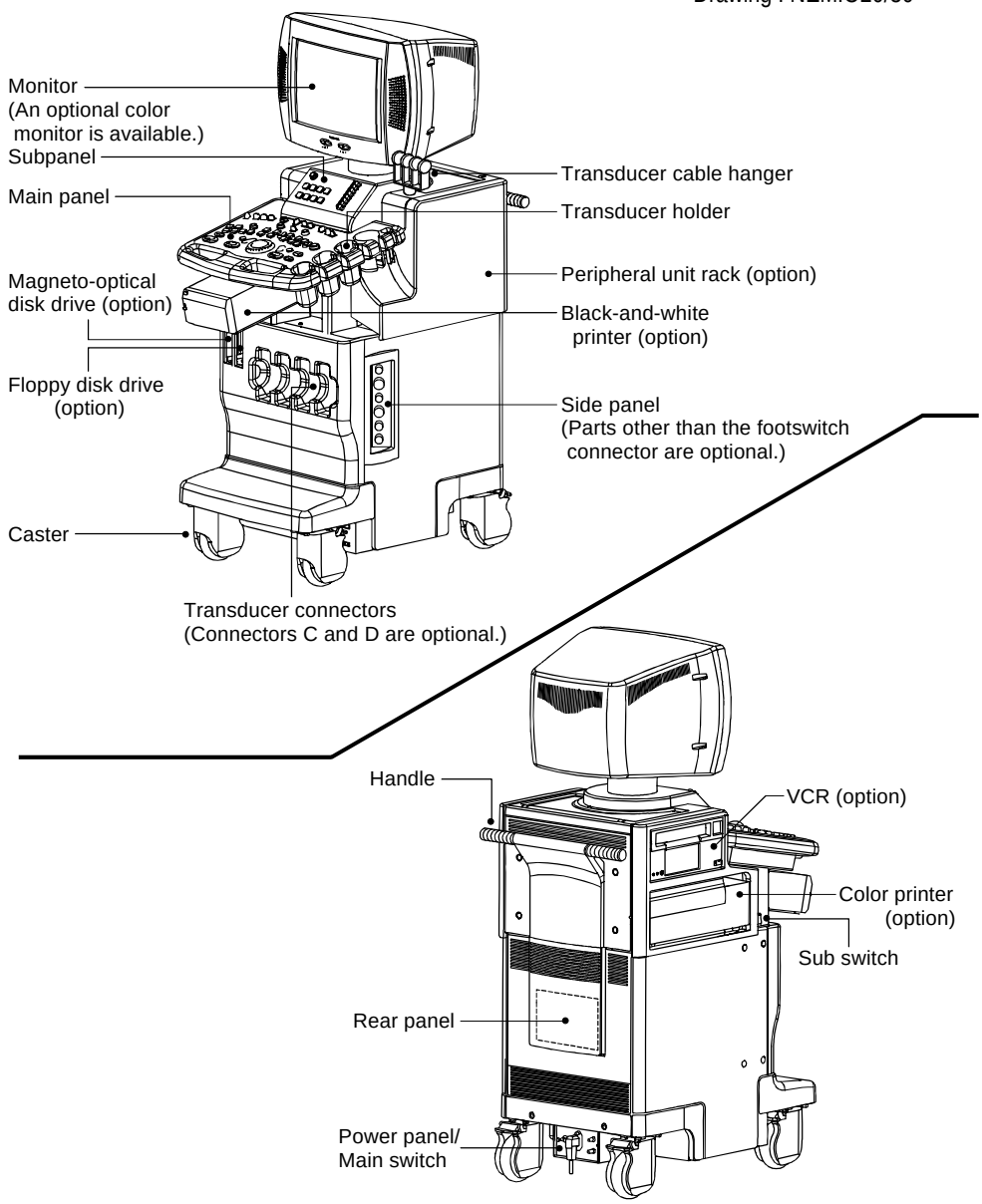
1. Overview

** Drawing : NEMIO20/30



Nemio 30 / Nemio 20

Check the detailed system configuration with the systems data

Nemio 10

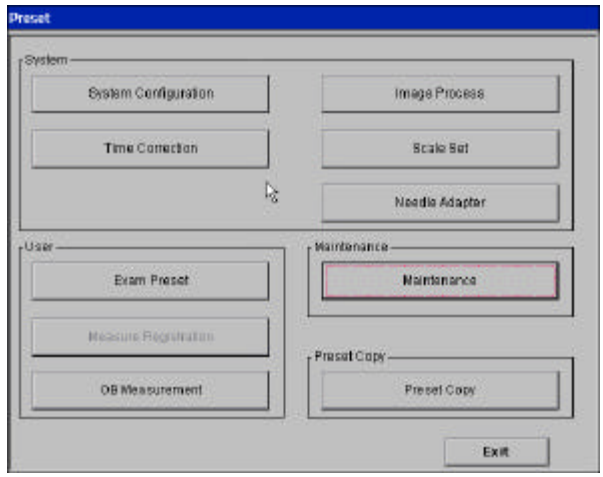
Check the detailed system configuration with the systems data

2. Special menu and Passwords

2.1 User Function screen

[PRESET D..] -> Preset -> [Shift] and [<] -> password "oimen" -> [OK]

2.2 Service function "Main menu" (see below photo)



[PRESET D..] -> Preset -> Maintenance -> [Shift] and [<] -> password "oimeN" (last "N" capital letter) -> [OK]

2.3 Special Configuration preset menu

[PRESET D..] -> Preset -> System Configuration -> [Shift] and [<]

2.3 Special Preset menu

[PRESET D..] -> Preset -> Exam preset -> [Condition Set] -> [Shift] and [<]

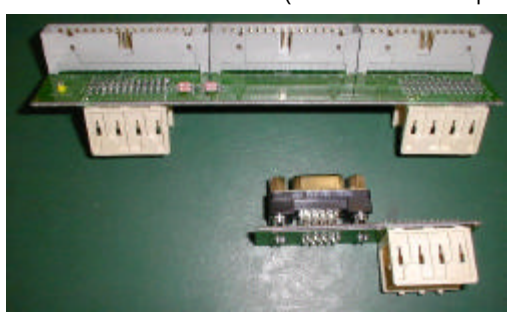
2.5 DMU "Service" menu

[APPLI] -> hummer mark (Utility) -> Configuration Utility -> SERVICE -> password "pc-ws"

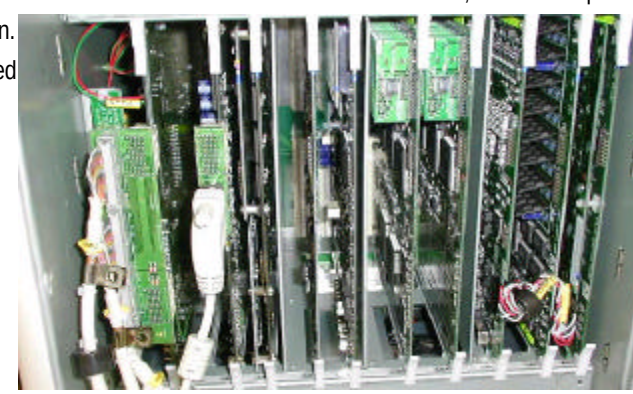
3. Minimum System check

3.1 The minimum system (with panel operation and overlay display)

1) SYSC PWB
2) ECDC PWB
3) SUBC PWB
4) RPNL PWB
5) + the following jig to display the image on TV screen.
   RPNL JIG : 55400ARPJG (order to SA-P if required



<when JIG is installed in Nemio back side ; left side on photo>



Note : Power Supply, Panel (CTPN), and Monitor must be okay for the above minimum system check.

4. User function settings

4.1 How to operate

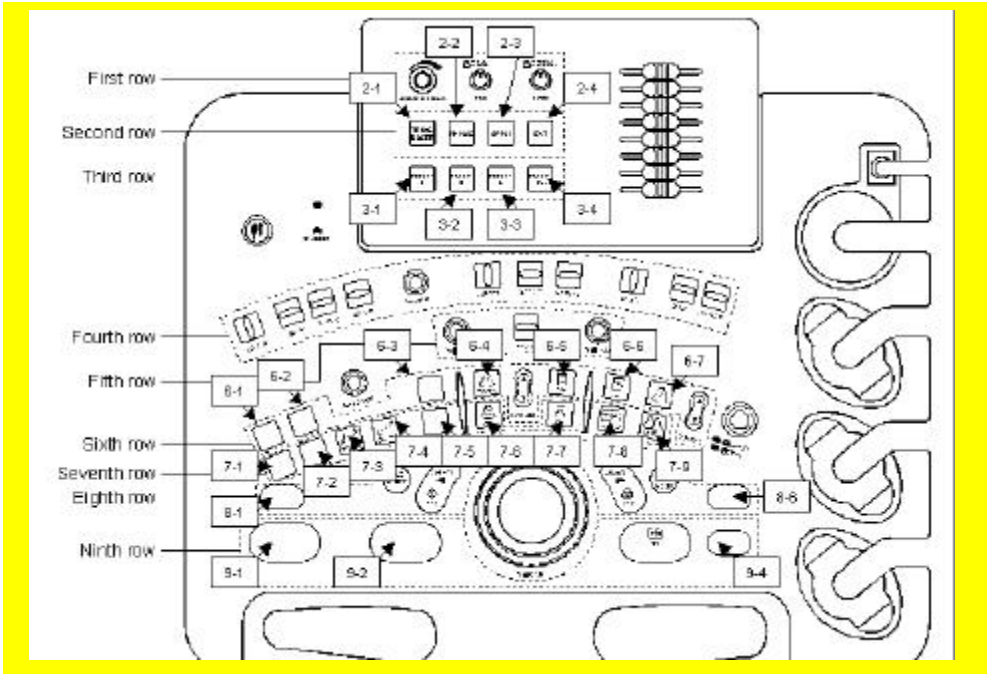
[PRESET D..] -> Preset -> [Shift] and [<] -> password "oimen" -> [OK]

Select the target switch from the Preset Key window and press the [SET] switch.

The Function List window is displayed.

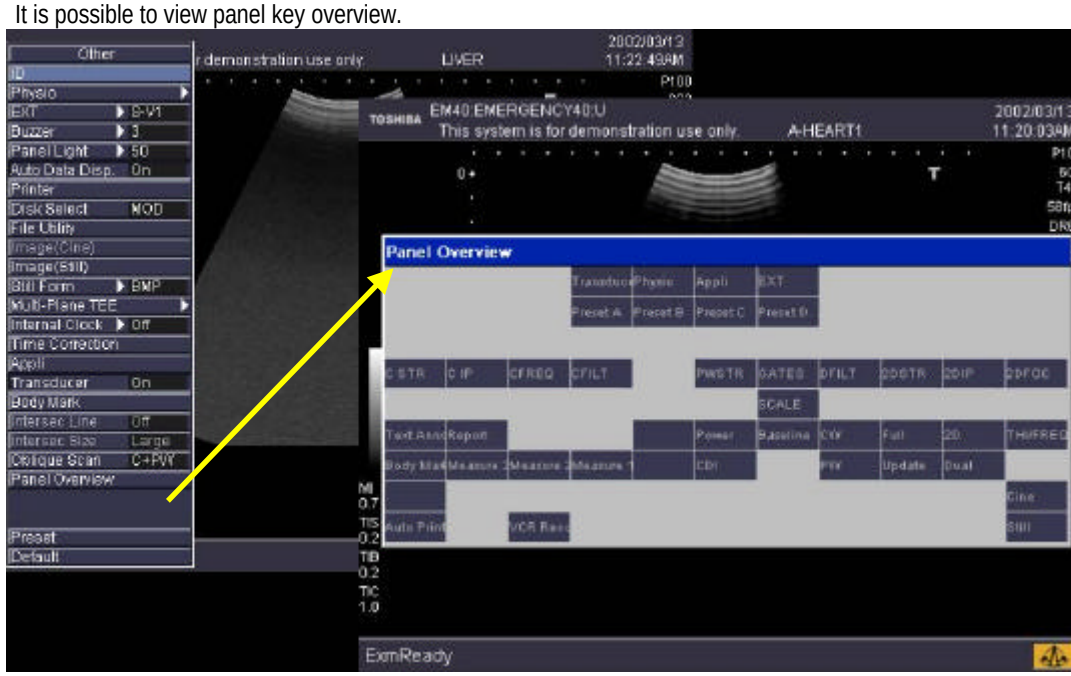
Select the function to be set and press [OK]. Repeat these steps to assign the desired functions.

When [OK] on the Preset Key window is pressed, the settings are saved in the system.



4.2 Panel Overview function (available on & after V3.0)

It is possible to view panel key overview.



5. IO Report

5.1 Saving image on TV screen

Press [Shift] and [F1] keys

(IQ Report Error may occur depends on the system settings. but, IQ report image is stored even with the error message.)

5.2 Viewing IQ report image

Service function "Main menu"

[PRESET D..] -> Preset -> Maintenance -> [Shift] and [<] -> password "oimeN" (last "N" capital letter) -> [OK]

Maintenance -> Report -> IQ report -> Image Data Viewer. Press any key to exit.

5.3 Download the IQ report data into MO or FD (Nemio10)

Service function "Main menu"

[PRESET D..] -> Preset -> Maintenance -> [Shift] and [<] -> password "oimeN" (last "N" capital letter) -> [OK]

Insert blank & properly formatted MO disk into left MO drive. Write protect must be set to OFF.

Select Service function "Main menu" -> (in Short-Cut Menu) select "Backup / Restore" ->

check command "Backup" -> check the back-up item ;

Select (put check mark on) "IQ Report" at the bottom OR

select "All Packages" , Select Drive to MO (or FD)

Press [Go], then system will ask to format MO disk, select OK to format and start back-up.

If MO disk format type does not match with Nemio MO, the system will display error message ;

"Disk Error Check to see if disk is present"

Check MO disk format type (FLOPPY TYPE (Super Floppy Type) FAT16) according to the section 7 "MO Format" for the proper format type.

Smart back-up will also back-up all user data.

Set Write protect to ON for safety. And mention system identification (such as customer and system serial number) on MO disk label.. This is because one MO disk can store the back-up data only for one particular system.

<Memo>

6. SCSI printer settings (CP-770DW)

Nemio (SSA-550A) plus Mitsubishi SCSI Color Printer CP770DW (CP770D)

The following you can find the procedures and check points for recommended SCSI color printer CP770DW (CP770D) connection On Nemio SSA-550A.

6.1 Special Configuration preset settings ;

Select [PRESET D..] on the panel, select “Preset” on the full-down menu. Select “System Configuration”, Press [SHIFT] plus [<]. The Special Configuration menu is now displayed.

Set “SCSI Color Printer” to ON.

Set “DMU Record Sel” according to the following table for the other Special Configuration settings if System has DMU (Data Management Unit = UIDM-550A).

Reboot (turn off / on) the system to activate the Special Configuration preset setting change.

DMU Record Sel (Special Config. Preset) / UF (User Function) Settings for Printer	U S	D M U
COLOR PRINT	This setting is to print US system Image ; no matter whether US System or DMU images are Displayed on TV screen.	This setting is to print US system image or DMU image which is displayed on TV screen. This setting is recommended for The system with DMU, mentioned In DMU unit Installation manual.
WS PRINT It is of course possible To set this switch on Different UF switch from The COLOR PRINT.	This setting is to print DMU Image ; no matter whether US System or DMU images are Displayed on TV screen.	Same as the left. Print only DMU Images.

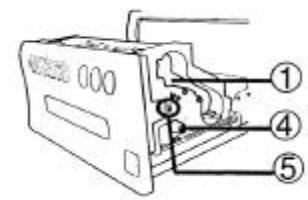
(“PRINT” in User Function is for B/W Printer.)

6.2 Set UF (User Function) switch accordingly.

(the attached pages 2/5 to 5/5 for the UF setting procedures.)

6.3 Confirm the following setting.

Below (5) : The Slide switch must be set to OPTION (SCSI).



6.4 Use SCSI cable included in Nemio package.

Be careful for the SCSI cable length because SCSI cable length must be with-in 3 meters in total

This 3 meters also includes SCSI cablings inside.

SCSI printer, MO drives, Nemio and DMU operation will be unstable if SCSI cable length is longer than the limited length = 3 meters.

6.5 SCSI terminate

Use SCSI terminator connector to terminate SCSI printer end.

SCSI printer, MO drives, Nemio and DMU operation will be unstable if no SCSI terminate.

Use "Active terminator" but do not use "Passive terminator". Passive terminator may cause unstable SCSI device operation and DMU operation such as some errors on MO

<Memo>

7. MO drive / format

7.1 Nemio (SSA-550A) : Cautions for MO Disk format

On Nemio (SSA-550A), the system may not recognize MO Disk due to It's formatting type. (or if not yet formatted)
If MO disk format type does not match with Nemio MO, the system will display error message ;
"Disk Error Check to see if disk is present"
Check MO disk format type (FLOPPY TYPE (Super Floppy Type) FAT16).

There are the following notes mentioned in the SSA-550A Operation manual
Application volume 2B730-611E. (below extracted from section 10.3 .)
Bitmap (BMP) or JPEG (JPG) data can be saved on the MOD. The preset "Image File Format"
is used to set one of the two formats for saving.

CAUTION:

The lossy data compression technique is always applied when JPG images are recorded onto a Magneto-Optical disk.
Although this technique helps increase the number of images that can be stored, it can cause image deterioration.
The amount of compression, therefore, must be restricted so that the image quality is maintained at a level which does not adversely affect diagnosis.

CAUTION:

Do not display BMP and JPG data that have been edited or registered by other devices. Such data may be damaged.

NOTE: Use MO disks that meet the following specifications:

Capacity 640 MB/230 MB

Format Windows format (Windows 2000 format is recommended)
Unformatted disks cannot be used.
Macintosh format disks cannot be used.
The supplied MO disks are not included in the warranty.
With the factory setting, data is saved in a folder by the patient ID.

It is possible to change the factory setting to create a folder for each examination date.
Contact your Toshiba service representative for the procedures to make this change.
Caution : On Nemio FILE UTILITY (can be registered on UF key), there is MO
Format menu. However, this is only QUICK FORMAT and this is not
PHYSICAL FORMAT function. So, if the MO Disk cannot be detected caused
By it's format style, Nemio MO Format function does not help.
Because of this situation, Use only recommended type MO Disk, but
Do not use non-recommended type MO Disks.
Just in case if non-recommended type MO Disk must be used, follow
The procedures shown on the next page.

7.2 Action : Format the MO Disk by "Formatter" available at internet.

There are several Formatters available. some are freeware. Below you can find the MO Formatter download site.

http://mo.fujitsu.com/global/download/index2dlwin.html

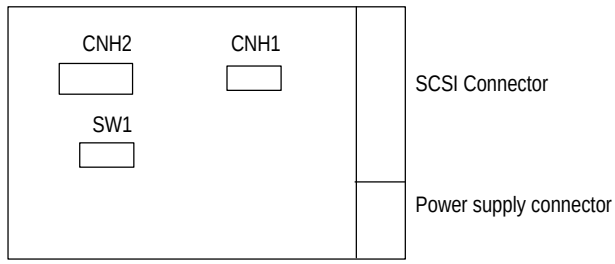
Fujitsu MO Formatter "MO Disk Formatter" low level format type \ Model	PV6000 PV8000 230M MO	PowerView UIDM-400A 640M MO	Nemio SSA-550A 640M MO	Nemio DMU UIDM-550A 640M MO
Floppy Type (FAT16) (Super Floppy Type FAT16)	OK	OK	OK	OK
Floppy Type (FAT32) (Super Floppy Type FAT32)	NG	NG	NG	OK
Hard Disk Type (FAT16) (FDISK type FAT16)	NG	OK	NG	OK
Hard Disk Type (FAT32) (FDISK type FAT16)	NG	NG	NG	OK

<Memo>

8. MO drive switch settings

(MO drive : Fujitsu MCE3064SS : Toshiba Part No. BSM31-3086)

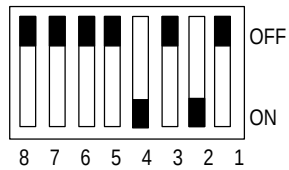
8.1 The following switch settings



Nemio with only one MO drive

(system without DMU)

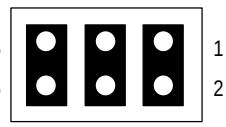
SW1
(SCSI ID)



2, 4 : ON

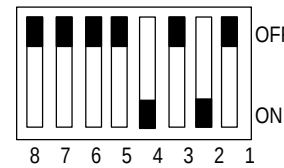
Others : OFF

CNH1
(terminatio



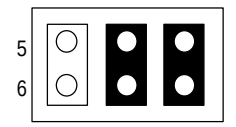
Nemio with two MO drives

Lest is for Nemio



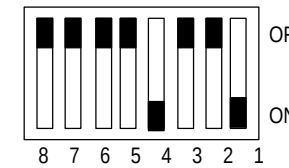
2, 4 : ON

Others : OFF



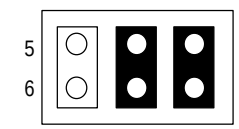
Remove the shot pin on 5 - 6

Right is for DMU (PC)



1, 4 : ON

Others : OFF

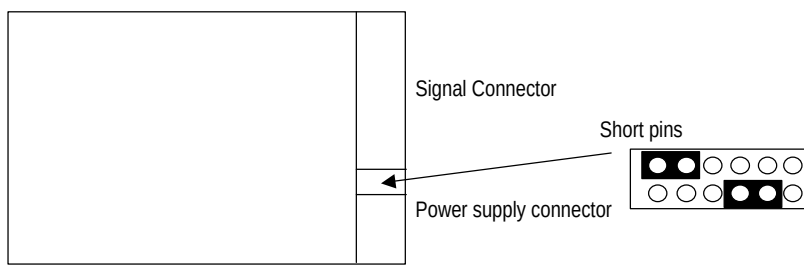


Remove the shot pin on 5 - 6

In case if termination and SCSI ID's are not set properly, the system operation maybe un-stable, such as SCSI errors or MO drive malfunctions. (cannot access MO drive, etc..)

9. FD drive switch settings (Nemio 10)

(MO drive : Fujitsu MCE3064SS : Toshiba Part No. BSM31-3086)



Note See Section 12 "Line Command" to activate FDD and MOD by some line commands.
See Section 38 "Image format" for the image data can be saved into MO drive or FD drive.

<Memo>

10. Nemio Option Software installation

Refer to section 37 "SYSC PWB… " for some notes about SYSC PWB replacement related with optional software !

10.1 Installation Procedure

-1 Turn ON the power supply of the SSA-550A.

-2 Remove write protection of the option key MO disk.

-3 Insert the option key MO disk into the right MO drive.

-4 Press [Preset D…] The Exam Select menu is displayed.

-5 Select [Preset] in the Exam Select menu. The Preset screen is displayed.

-6 Select [Maintenance] from the Preset screen. The "User Maintenance" menu is displayed.

-7 Press the [Shift] + [<] keys and enter the dedicated password "oimeN" on the password input screen..
After that, press [OK] . The menu for service engineer is displayed.

-8 Select [Short-cut Menu] [Software Install/Remove].

-9 Select the "Install" in Command.

-10 Select "MO" in Drive.

-11 Place a check in the check box for the option you will install in Option Software.

-12 Click [Go]. (Confirm that there is no error display.) Do not double click GO, it will cause error.
Installation is completed when "Done!" is displayed to the right of the Progress status bar.

-13 Remove the option key disk from the MO drive and write-protect it.
If key MO disk cannot be ejected out, exit (select Home) from the service menu and try it again.

-14 Attach the kit label to SSA-550A.

10.2 Major Nemio options

Model name	Service part number (only key MO disk)	Function
USTH-550A	BSM31-3210-01	THI
USTH-551A (Nemio 10)	BSM31-3211-01	THI
USHI-550A	BSM31-3212-01	CHI / FEI
USHI-551A (Nemio 10)	BSM31-3789-01	CHI / FEI
USDA-550A	BSM31-3213-01	DCA
USTD-550A	BSM31-3214-01	TDI
USHP-550A	BSM31-3215-01	HPRF
USDF-550A	BSM31-3792-01	Dynamic Flow
USAC-550A	BSM31-3217-01	ACM
USTI-550A	BSM31-3216-01	TIC

* The above service part number is only for trouble repair, but not for sale.

* The above service part number does not include option case, manuals.

* Refer to the systems data for the option software details for your sales purpose.

Note

1 It is recommended to un-install optional software for the following cases.
a) Replacing SYSC PWB, b) Re-install Nemio system software, c) System clear by ALL CLEAR function.
SYSC PWB has the system serial No., if SYSC is replaced, all optional software will be automatically removed.

2 The optional key MO disks can be used as anew key MO disks after un-install.

3 If particular MO disk was already installed in another system, it will be not possible to un-install
it in this system which has another serial number. So that it is very important to remember which MO disk was installed for which system (serial number).

<Memo>

11. DMU Option Software installation

11.1 Installing/Uninstalling the Optional Application Software (Install/Uninstall)

The optional application software can be installed or uninstalled using the Configuration Utility window.

<<Setting procedure>>

-1 Click [Utilities] in the toolbar of the main window and select Configuration Utility.

-2 Click [Service] and enter the utility password "pc-ws".

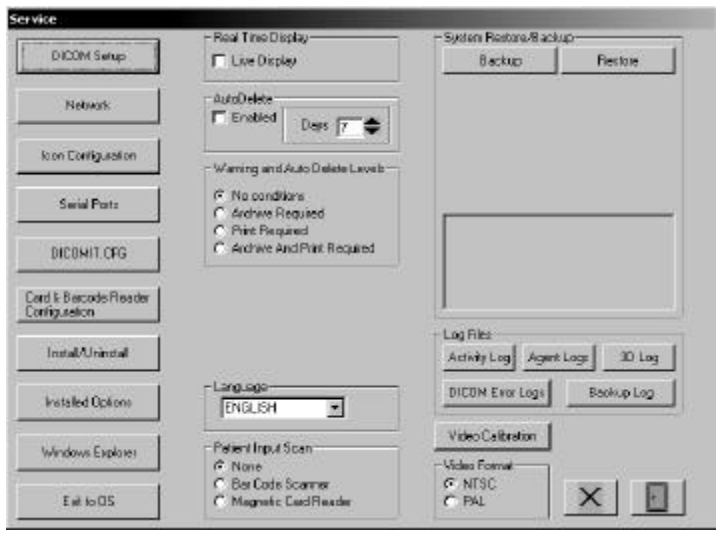
<<To install additional application software>>

Insert the optional application software installation FD in the drive and click [Install/Uninstall].

After installation, reboot the system.

Once the MO is used for installation, it cannot be used in other UIDM-550A systems.

The MO is designed for exclusive use by one UIDM-550A system, and it is required for uninstalling the installed optional application software. The MO is also required for reinstalling optional application software that is uninstalled. Therefore, the MO must be retained.



<<To uninstall optional application software>>

Insert the MO that was used to install optional application software in the drive and click [Install/Uninstall] .

After un-installation, reboot the system.

The MO used for un-install is initialized and can be used for other UIDM-550A systems.

CAUTION:

Do not write any other files on the installation MO. Doing so may destroy the data.

<<Display of the installed options>>

When [Installed Options] is clicked, the installed options are listed.

Note

1 It is recommended to un-install optional software for the following cases.

a) Re-install DMU application software, d) Any other DMU troubleshooting.

2 The optional key MO disks can be used as anew key MO disks after un-install.

3 If particular MO disk was already installed in another system, it will be not possible to un-install it in this system which has another serial number. So that it is very important to remember which MO disk was installed for which system (serial number).

11.2 Major DMU options

Model name	Service part number (only key MO disk)	Function
UDPA-550A	BSM31-3231-01	Panoramic View
UDFE-550A	BSM31-3232-01	Fetal Face
UDTI-550A	BSM31-3245-01	TIC
UDAT-550A	BSM31-3247-01	ACT
UDTD-550A	BSM31-3248-01	TDI
UDAM-550A	BSM31-3249-01	ACM
UDSE-550A	BSM31-3250-01	Stress Echo
UDFR-550A	BSM31-3251-01	3D
UDFR-551A	BSM31-3252-01	Fusion 3D
UDDS-550A	BSM31-3253-01	DICOM
UDTM-550A	BSM31-3254-01	Tele Medicine (Live View)
UDSR-550A	BSM31-3255-01	Summery Report

* The above service part number is only for trouble repair, but not for sale.

* The above service part number does not include option case, manuals.

* Refer to the systems data for the option software details for your sales purpose.

<Memo>

12. Line Command

12.1 How to set Line Command

a) Press [PRESET D..], then select PRESET in the pull-down menu.

b) Select "System Configuration". Then press [SHIFT] and [<].

c) Scroll down the menu, Find "Line Command" and set it to ON. Press OK when system ask you "Are you sure?"

d) System will ask you for power off. So, power off the system and power on the system.

e) Press [SET] key.

f) Press [Ctrl] and [Alt] and [D] keys simultaneously. There is no beep sound, but don't worry, it is on Line Command.
(Also note that the above is not [Ctrl] and [Alt] and [Del] keys, but [Ctrl] and [Alt] and [D] keys.)
Now it is ready to input the line command. Below picture one example when input version display command

Line command display location

Example of version display command input :

key-in "version#=" then press ENTER, then version and TV system will be displayed for a while.

g) After accessing Line Commands, please set Line Command to OFF and power off / on the system.
It is not very sure, but it is better set Line Command off (and re-boot the system) for stable system operation.

	Command	Purpose	
1	optionchange1	Preparation to enter FDD$ON and MOD$ON commands.	
2	FDD$ON	Make FDD enable.	"FDD$OFF" to disable FDD.
3	MOD$ON	Make MOD enable.	"MOD$OFF" to disable MOD.
4	version#=	Version and TV system checking. If only for Version, or you may use HW/SW	
5	tveia$on	Set screen format to NTSC.	
6	tvpal$on	Set screen format to PAL.	
7	usaop$on	Only for USA (TAMS). It is to set acoustic power to 80% from max.	
8	usaop$off	Except for USA (TAMS). It is to set acoustic power 100%.	
9	txbfispmo flttbl5	To add new probe PIT data into TXBF via MO.	
10	txbfispfd fittbl5	To add new probe PIT data into TXBF via FD.	
11	SetSystemConfig=	Preparation to enable FDD and MOD on Nemio10 only.	

12.2 When Line Command required ?

<CASE-1> : System : Nemio30 with DMU installed.

SYSC PWB was replaced for some kind of troubleshooting. After replacing SYSC PWB, DMU screen (APPLI) menu is shifted to upwards.

<Action required>

SYSC PWB in the service parts stock is usually set to NTSC TV system.
If DMU has PAL TV settings, SYSC PWB (Nemio TV system) will not match to the TV system settings on DMU.
So that only DMU screen has vertically shifted image. So, set TV system by Line Command function shown below.
Note that Nemio Observation Monitor is PAL/NTSC universal type. So that it will be no problem on Monitor image.

-1 Select [Preset] in the Exam Select menu. The Preset screen is displayed.
-2 Select [System Configuration] from the Preset screen.
-3 Press the [Shift] and [<] keys. The Special Configuration screen is displayed.
-4 Set the "Line Command" to On and press [OK].
-5 When the message "Are you sure" is displayed, press [OK].
-6 When the message "Please Power OFF" is displayed, reboot the system.
-7 Press [SET] switch.
-8 Press the [Ctrl]+[Alt]+[D] keys simultaneously.
-9 Enter "version#=" using the keyboard and press [ENTER].
-10 The system software version and TV system will be displayed for a while. Check if TV system is set wrongly.
-11 Enter "tvpal$on" using the keyboard and press [ENTER] to set the Nemio TV system to PAL. "tveia$on" for NTSC.
-12 Set the Line Command to OFF then, Turn off / on the system, and check the problem.

Note This will be the same problem if DMU side TV setting is wrong.
(DMU TV setting is on DMU service menu.)

<CASE-2> : System : Nemio10 only with FDD installed.

After replacing SYSC PWB, it is not possible to access Floppy Disk Drive. There is no FDD
Even in File Utility menu (System does not recognize FDD.)

<Action required>

SYSC PWB in the service parts stock is usually set for Nemio30 and Nemio20 which has only MO drive.
To activate FDD, set the following Line Commands.

-1 Step -1 to -8 are the same as above.
-2 Enter "SetSystemConfig=L" using the keyboard and press [ENTER].
-3 Enter "optionchange1" using the keyboard and press [ENTER].
-4 Enter "FDD$ON" using the keyboard and press [ENTER].
-5 Set the Line Command to OFF then, Turn off / on the system, and check the problem.

<CASE-3> : You borrow SYSC PWB from Nemio 10 temporary for service checking purpose.

System does not recognize MO drive.

<Action required>

-1 Step -1 to -8 are the same as above.
-2 Enter "optionchange1" using the keyboard and press [ENTER].
-3 Enter "FDD$ON" using the keyboard and press [ENTER].
-4 Enter "MOD$OFF" using the keyboard and press [ENTER].
-5 Set the Line Command to OFF then, Turn off / on the system, and check the problem.

Note You do not need special Line command "SetSystemConfig=L" for this case. That is only for Nemio 10.

13. Nemio Data Back-up & Restore

13.1 BACK-UP Operation procedures

Service function "Main menu"

[PRESET D..] -> Preset -> Maintenance -> [Shift] and [<] -> password "oimeN" (last "N" capital letter) -> [OK]

Insert blank & properly formatted MO disk into left MO drive. Write protect must be set to OFF.

Select Service function "Main menu" -> (in Short-Cut Menu) select "Backup / Restore" ->

check command "Backup" -> check the back-up item ;

Select (put check mark on) "IQ Report" at the bottom OR

select "All Packages" , Select Drive to MO (or FD)

Press [Go], then system will ask to format MO disk, select OK to format and start back-up.

If MO disk format type does not match with Nemio MO, the system will display error message ;

"Disk Error Check to see if disk is present"

Check MO disk format type (FLOPPY TYPE (Super Floppy Type) FAT16) according to the section 7 "MO Format" for the proper format type.

Smart back-up will also back-up all user data.

Set Write protect to ON for safety. And mention system identification (such as customer and system serial number) on MO disk label.. This is because one MO disk can store the back-up data only for one particular system.

13.2 RESTORE Operation procedures

Insert MO disk which has back-up data stored.

[PRESET D..] -> Preset -> Maintenance -> [Shift] and [<] -> password "oimeN" (last "N" capital letter) -> [OK]

Select Service function "Main menu" -> Backup / Restore -> check command "Restore" -> check the back-up item select "All Packages. Select Drive to MO (or FD)

Press [Go], then system will ask to format MO disk, select OK to format and start back-up.

14. DMU Data Back-up & Restore

14.1 Data backup

-1 Using the backup function of the application software

Place the test MO in the MO drive and copy the files to the MO.

It is possible to use the copy function of the application software installed in the system.

Note that if no problems are found in operational checks after finished, it is not necessary to restore the backup files.

Data backup procedures - Using the copy function of the application software. Click the Patient List on the toolbar.

Select the study to be saved and click the [Send] button. Select "MOD Drive".

-2 Using Windows Explorer

If the system application cannot be started up, use Windows Explorer. In this case, also back up the following file.

The backup file must be restored together with the data.

C:\Dicomit\db\tpatient.mdb

Note that if no problems are found in operational checks after finished, it is not necessary to restore the backup files.

Data backup procedures - Using Windows Explorer. Launch Windows Explorer.

Copy all of the files in the following directories to the MO.

D:\Images D:\Advanced D:\Measure Copy the following file to the MO. C:\Dicomit\db\tpatient.mdb

14.2 System configuration backup

Perform the following procedures to back up the settings of the system.

Backup of the system settings. Click [Utilities] on the toolbar of the main menu and select "Configuration Utility". Click [Service] and enter the utility password [pc-ws]. Place a formatted MO into the MO drive and click [Backup].

If the system application cannot be started up, use Windows Explorer to copy the following files to the MO.
c:\dicomita\dicomit.cfg
c:\dicomit\ini\ToFile.cfg
c:\dicomit\ini\Toshiba.cfg
c:\dicomit\dtk\dtk32.mdb
c:\winnt\system32\drivers\etc\Lmhosts
c:\tomtec*.ecp (all files with extension "ecp")
c:\tomtec*.dct (all files with extension "dct")
Note that if no problems are found in operational checks after finished, it is not necessary to restore the backup files.

14.3 RESTORE

1 Restoring the system. Click [Utilities] in the toolbar of the main window, and select Configuration Utility. Click [Service] and enter the utility password "pc-ws" .Insert the backup MO disk in the MO drive and click [Restore]. Select the folder corresponding to "AE Title" of the PC (example: "AE Title_TOSHIBAxxxxxxx"). Click [OK].

14.4 Restoring the DB (database)

-1 Using the application function

When backup was performed using the application function, follow the procedures below to restore the database.

Restoring the database - Using the application function. Click the Patient List button on the toolbar. Select "MO Images" in the "Source" selection column. Select the study to be restored and click the [Retrieve] button.

-2 Using Windows Explorer

When Windows Explorer was used for backup because the system application could not be started up, follow the procedures below to restore the database.

Restoring the database - Using Windows Explorer. Launch Windows Explorer. Copy all of the files from the MO to the following directories.
D:\Images D:\Advanced D:\Measure
Copy the "tpatient.mdb" file from the MO to the following directory.
C:\Dicomit\db
After restoration is completed, start up the application software.
Restoring the database - Using Windows Explorer. Launch Windows Explorer.
Copy all of the files from the MO to the following directories.
D:\Images D:\Advanced D:\Measure
Copy the "tpatient.mdb" file from the MO to the following directory
C:\Dicomit\db
After restoration is completed, start up the application software.

15. Nemio system software re-installation

Back-up User data and un-install Nemio option software before you do the following.
See the section 10 Option software installation and section 13 Data back-up and restore.

15.1 SOFTWARE INSTALLATION

-1 Insert the System Disk in the FD drive.
-2 Turn ON the power and hold down the FREEZE switch.
-3 When the initial screen is displayed and the message "Detect FREEZE key" is displayed at the bottom of the screen, release the FREEZE switch.
-4 The 2D screen is displayed when system software installation is completed.
* Misalignment between the 2D image and characters may occur after 2D image display.
This can be solved by rebooting the system. If the problem persists even after the system is rebooted, go to step (17).
-5 Remove the System Disk from the FD drive.
-6 Reboot the system.
-7 Press [Preset D..] . The Exam Select menu is displayed.
-8 Select [Preset] in the Exam Select menu. The Preset screen is displayed.
-9 Select [System Configuration] from the Preset screen. The " System Configuration " screen is displayed.
-10 Press the keys. The Special Configuration screen is displayed.
-11 Set the "Line Command" to On and press [OK].
-12 When the message "Are you sure" is displayed, press [OK].
-13 When the message "Please Power OFF" is displayed, reboot the system.
-14 Press the [SET] switch.
-15 Press the [Ctrl]+[Alt]+[D] keys simultaneously.
-16 When this kit is to be installed in the USA, enter "usaop$on" using the keyboard and press [Enter] key.
When this kit is to be installed in countries other than the USA, enter "usaop$off" and press [Enter] key.
-17 If the TV format remains abnormal even after the system is rebooted, follow the steps below.
(a) For the NTSC TV format, enter "tveia$on" and press [Enter] key.
(b) For the PAL TV format, enter "tvpal$on" and press [Enter] key.
(c) Reboot the system.
-18 Turn OFF the power and disconnect all transducers.
-19 Turn ON the power.
-20 When the 2D screen is displayed on the system monitor, insert the System Maintenance Disk in the FD drive.
-21 Make acoustic power minimum and press [SET] switch.
-22 Press the [Ctrl]+[Alt]+[D] keys simultaneously.
-23 Enter " txbfispfd flttbl7" (the characters other than (7) in this command are alphabetical characters) using the keyboard and press [Enter] key.
-24 Following comment is displayed in about one minute.
ISP terminated with error 0
Error zero means successfully terminated.
-25 Remove the System Maintenance Disk from the FD drive.
-26 Set the "Line Command" in the Special Configuration screen to Off and press [OK].
-27 When the message "Are you sure" is displayed, press [OK].
-28 When the message "Please Power OFF" is displayed, turn OFF the power.
-29 Connect transducers.

15.2 DATA RECOVERY

Confirm that the data items that were recorded in section 2 " DATA RECORDING" have not changed.
If some settings are to be changed or appear to be incorrect, change or correct them.

15.3 CONVERSION OF USER-REGISTERED MEASUREMENT DATA

-1 Start the system and press PRESET D. . The Exam Select menu is displayed.
-2 Select [Preset] from the Exam Select menu. The Preset screen is displayed.
-3 Select [Measure Registration] on the Preset screen. The Measure Registration screen is displayed.
-4 If user-registered measurement data exists, an error message is displayed. Press [OK] several times until the error message screen disappears.
* On this screen, "Error" is displayed in place of the user-registered measurement name.
-5 Press the [Shift] and [<] keys. The [Convert] switch is displayed.
* If the [Convert] switch is grayed out, the following steps need not be performed.
Press [Exit] to close the Measure Registration screen.
-6 Press the [Convert] switch., press [OK].
-7 When conversion is completed,. Press [OK].
-8 Confirm that the measurement names that were displayed as "Error" are now displayed correctly.
-9 Press [Exit] to close the Measure Registration screen.

<Memo>

16. DMU Application software re-installation

16.1 For Version is V1.1 or later version

Remove all probes. Remove front cover - only one screw at the upper part of front cover.
(below two points are fixed by "magic tape" tightly ; just pull it.)
Find mouse and keyboard connectors. Remove internal ones originally connected and
connect external mouse and keyboard supplied with the system.
Turn on the system. Select APPLI switch on Nemio to display DMU screen after boot-up.
Set Write protect for MO disk.
Insert MO disk)(or CD-ROM) into right side MO disk. (left side is also okay, but right one is basically for DMU)
Select Utility in tool bar - Configuration - (password : pc-ws) - select service - EXIT TO OS.
(or Enter [Ctrl]+[Alt]+[Delete] to start the task manager and terminate the TDICOM10 application)
Start Windows Explorer, select (CD-ROM or) Removable Disk [E:] (means MO) , and double-click .
You can find "UpV12" directory (or UpV11). open this directory and find batch file named ;
UpV11.bat (or UpV12.bat). Double click this batch file.
Installation will be started.
During installation, there will be the message on page 6/6 may appear : saying
Windows 2000 hotfix setup... [OK] This is the message regarding red-code virus.
Select OK to continue. Then proceed further software Installation according to the messages.
The installation will be finished with-in a few seconds.
Remove the system software disk from the drive. Select DMU application "Nemio" from the start bar.
After DMU application starts, de-select APPLI switch. Turn off the system.
Restart the SSA-550A

16.2 For Version V1.0 DMU(will be very rare case)

Remove all probes. Remove front cover - only one screw at the upper part of front cover.
(below two points are fixed by "magic tape" tightly ; just pull it.)
Find mouse and keyboard connectors. Remove internal ones originally connected and
connect external mouse and keyboard supplied with the system.
Turn on the system.
Select APPLI switch on Nemio to display DMU screen after boot-up.
Set Write protect for MO disk.
Insert MO disk)(or CD-ROM) into right side MO disk.
(left side is also okay, but right one is basically for DMU)
Select Utility in tool bar - Configuration - (password : pc-ws) - select service - EXIT TO OS.
(or Enter [Ctrl]+[Alt]+[Delete] to start the task manager and terminate the TDICOM10 application)
Start Windows Explorer, select (CD-ROM or) Removable Disk [E:] (means MO) , and double-click .
You can find "APP" directory. open APP directory and select all files - copy..
then select C drive, (right click) COPY.
(This means copy all the files / directory under "APP" directory in MO disk to DMU "C" drive.)
Overwrite all the files and directory.
Remove the system software disk from the drive.
Select DMU application "Nemio" from the start bar.
After DMU application starts, de-select APPLI switch. Turn off the system.
Restart the SSA-550A

17. DMU Network settings

17.1 Network Settings for UIDM-550A

The UIDM-550A Workstation, or DMU, is a Windows 2000 based system, so the method for making the network settings is slightly different than that used for the PowerView, which is a Windows NT based system.
The following is offered as an aid in navigating the newer system.

1 To get to the Network Settings area, use the same steps as those used on the PowerView.
Click on the Hammer on the toolbar, select Configuration, and click on the Service button and enter password pc-ws.
2 This will bring you to the Service Configuration screen. Click on the Network button as before.
3 You will now see the Windows 2000 Network Connection screen.
4 Click on Advanced on the menu bar, and select Network Identification from the drop down menu.
5 You will see the System Properties screen. Click on Properties to rename the DMU to your desired name.
6 On the Identification Changes screen, type in the name selected for your DMU.
7 Click on OK for the name change, and OK for the System Properties.
8 That will bring you back to the Network Connections screen. Double click on Local Area Connection, below Make New Connection.
9 That will bring up the Local Area Connection Properties screen. Select Internet Protocol (TCP/IP) and then click on Properties.
10 That will bring up the Internet Protocol (TCP/IP) Properties screen where you can enter your assigned IP Address.
11 After entering the IP address, click on OK on this screen, and OK on the next screen. You will get a message. asking if you want to restart now. Click on Yes to accept the restart.
12 After the DMU restarts, you can continue with the configuration the same as you do with the PowerView systems; DICOM setup, Install Options, etc.

<Memo>

Note If the system start asking you for LOG-ON password after changing some Network settings, check the next section 18 "DMU LOG-ON password" to remove the LOG-ON message.

18. DMU LOG-ON password

Nemio DMU (UIDM-550A) log-on password

18.1 [TROUBLE]

DMU ask you for log-on password during boot-up.

18.2 [OUTLINE]

For DMU password, this password must be "system".

We suppose the registry file was changed by some improper re-works for network settings.

18.3 [SOLUTION]

The following you can find the solution.

This work is to setup Windows auto log-on with default password.

So that after trying the following procedures "1)" to "8)", Windows will not asking you for log-on but it will be automatically log-on.

BE CAREFUL DO NOT ACCESS ANY OTHER REGISTRY FILES EXCEPT THE ONE WE MENTIONED BELOW !!

Connect keyboard and mouse to the DMU. Switch on.

1) logon with the "system" password.
2) With the "Window" key on your keyboard go to the "start bar" and select Start -->
3) RUN....
   type "regedit" <enter>
   In the path :
   Mycomputer \ HKEY_LOCAL_MACHINE \ software \ Microsoft \ windowsNT \ CurrentVersion \ WinLogOn
   You will see that the "AutoAdminLogon" is set to "0"
4) Double click on "AutoAdminLogon" and change the value to "1"
5) Then with the mouse go to Edit --> New --> String Value
6) Type "DefaultPassword" <enter>
   Right click on it and select "modify"
   Type as value "system"
   Now exit and save the new settings.
7) Shutdown and disconnect your keyboard and mouse and connect the panel and trackball again.
8) Switch back on and the unit is running without asking for Log-on message.

19. Nemio Reset (without turn off / on)

19.1 Nemio can be restarted instead of Power off / on by the following.
Press the combination of ; FREEZE & SELECT (NEXT) & NEW PATIENT switches.

20. DMU Reset (without turn off / on)

20.1 Preparation

External Keyboard
External Mouse
Remove rear cover to see DMU PC inside to access PC power switch afterwards.
Remove front cover by removing only one screw. (bottom of front cover is fixed by "magic tape" strongly.)
Refer to service manual for those mechanical dis-assembly procedures.
At the system front side, you can find DMU PC rear side. So that remove standard Keyboard and Mouse connectors and connect External Keyboard and External Muse to the proper connectors on DMU PC rear.
Also prepare MO disk.

20.2 Operation procedures-1

Turn on Nemio.
After boot-up, select [APPLI] switch.
Now DMU can be operated by External Keyboard and External mouse.
Select hummer mark on TOOL BAR. Select Configuration Utility.
Select [SERVICE] then key-in "pc-ws" as a password to enter Service menu.

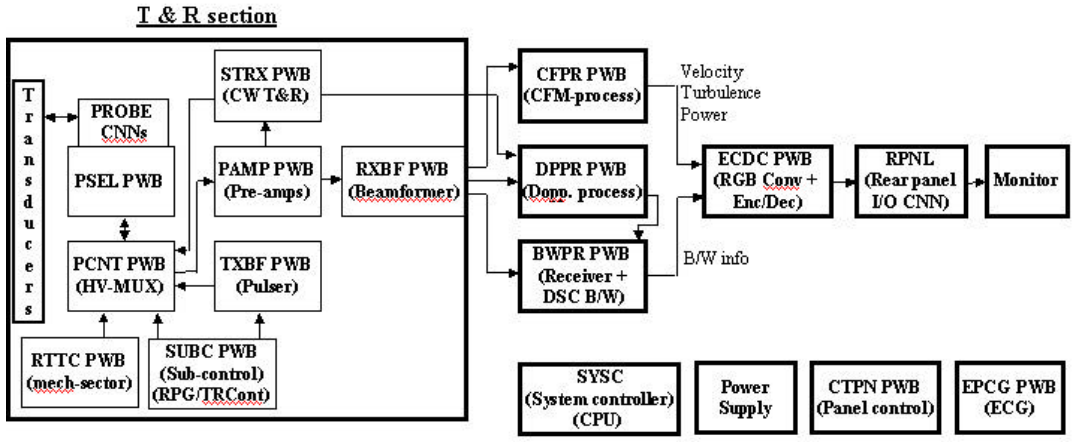
If optional software were installed, un-install those options by INSTALL/UNINSTALL.
For the procedures for un-installation, you of course need the original optional software key MO (or FD).
Un-install all optional software accordingly.
If any important patient data in HDD, we also recommend you back-up those data into MO disks.
Those patient data will be not deleted by the following process, but as usual (generally speaking),
it is better back-up those user data into MO disks for safety back-up.
Select [EXIT TO OS]
The message will appear. Select [OK] to exit to the Windows OS.
Then move the courser to START, you can find the DMU application software "Nemio" at the top of START bar,
Select "Nemio" in the START bar, then Nemio DMU application will be re-started.

20.3 Operation procedures-2

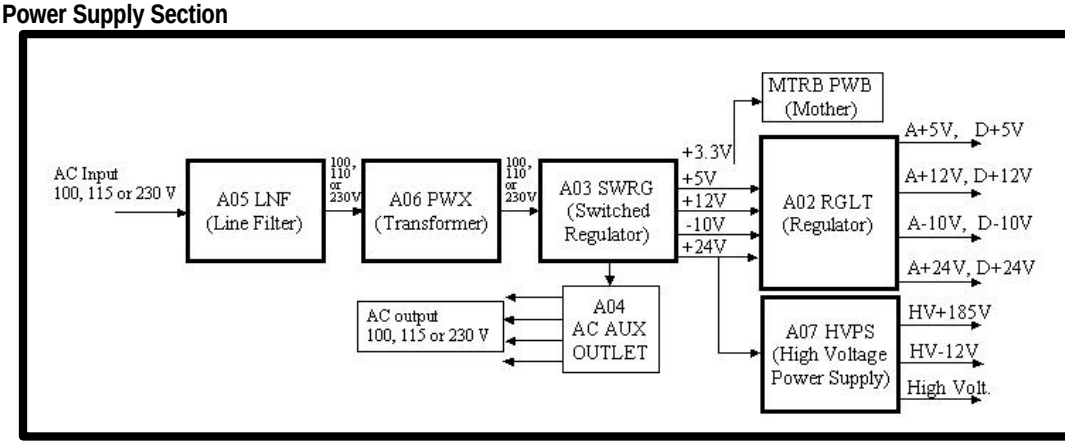
If the above, you exit to Windows OS via service menu. But you can also exit to OS by simple way.
After you go to APPLI, press the keys : [Ctrl] + [Alt] + [Del], then Windows Security screen will appear.
Select "Task Manager", Task Manager screen will appear. Select "End Task" to end all the activating Tasks.
After ending all those Tasks, it will be Windows screen. Then the procedures will be the same as the above.

21. Total Blockdiagram

21.1 General Blockdiagram



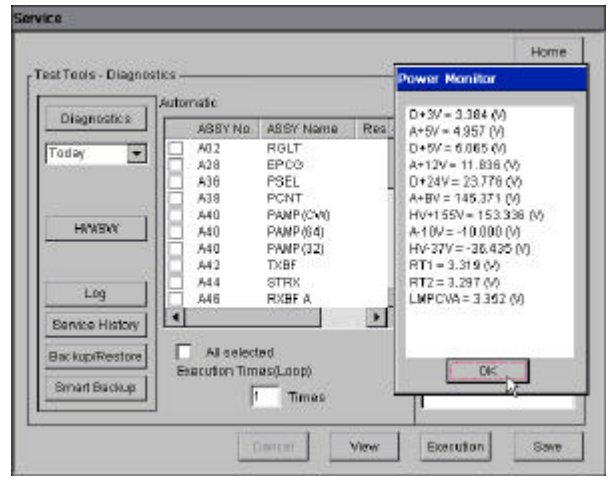
21.2 Power Supply Section



"Power Monitor" function is available in Service menu - Test Tools - Diagnostics

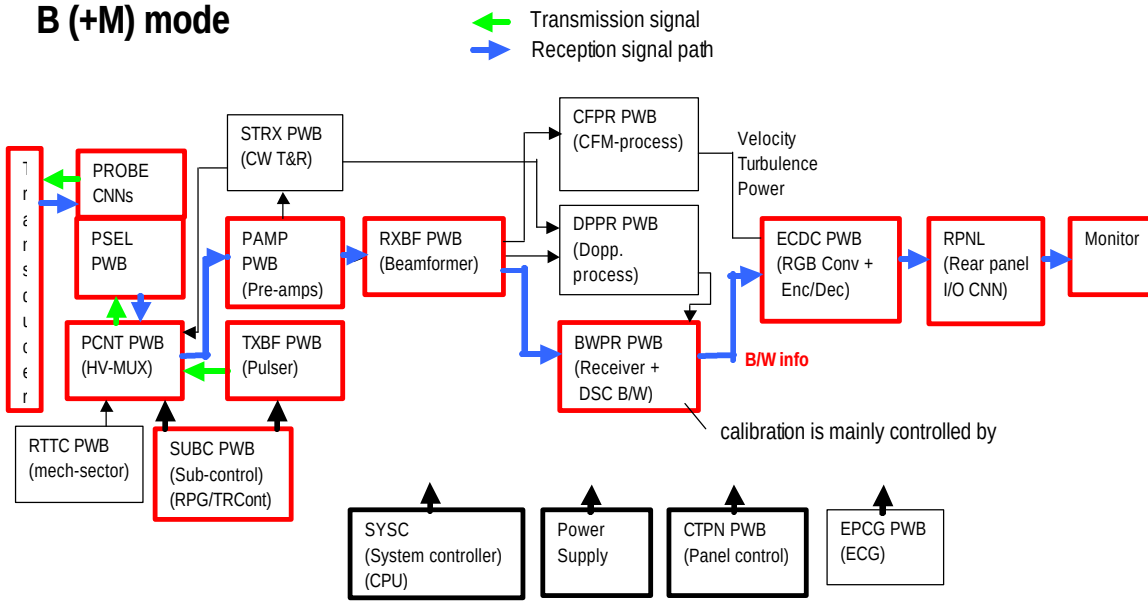
[PRESET D..] -> Preset -> Maintenance -> [Shift] and [<] -> password "oimeN" (last "N" capital letter) -> [OK]

Service menu items : For the details, refer to 2D730-1511E Service manual [Maintenance Menu Volume]



21.3

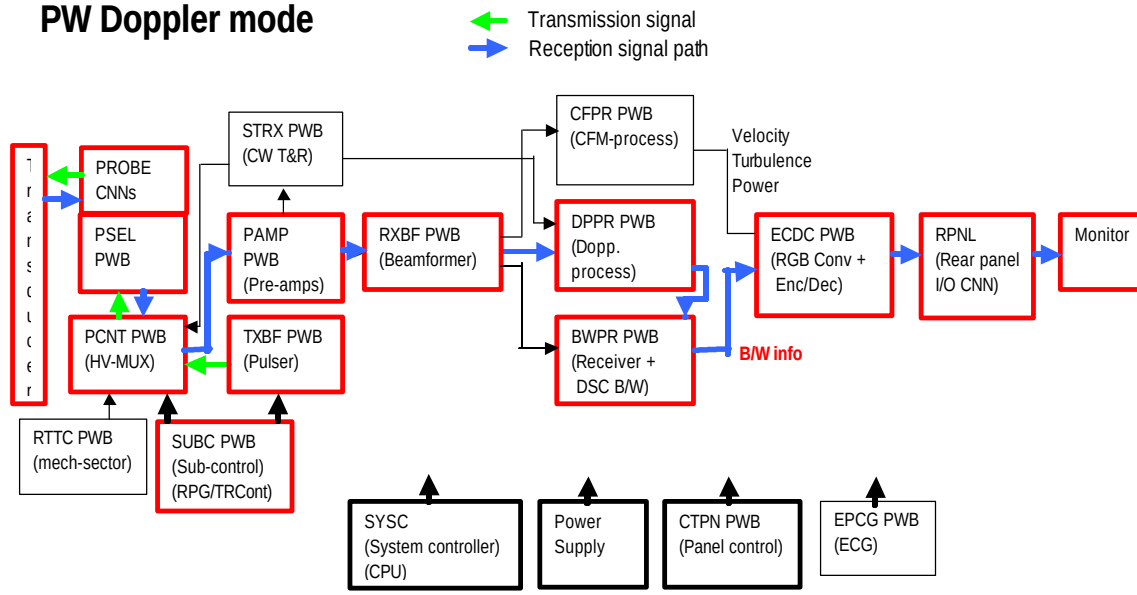
B (+M) mode



Note SYSC PWB, Power Supply parts, SUBC PWB and CTPN PWB (Main Panel) must be okay.

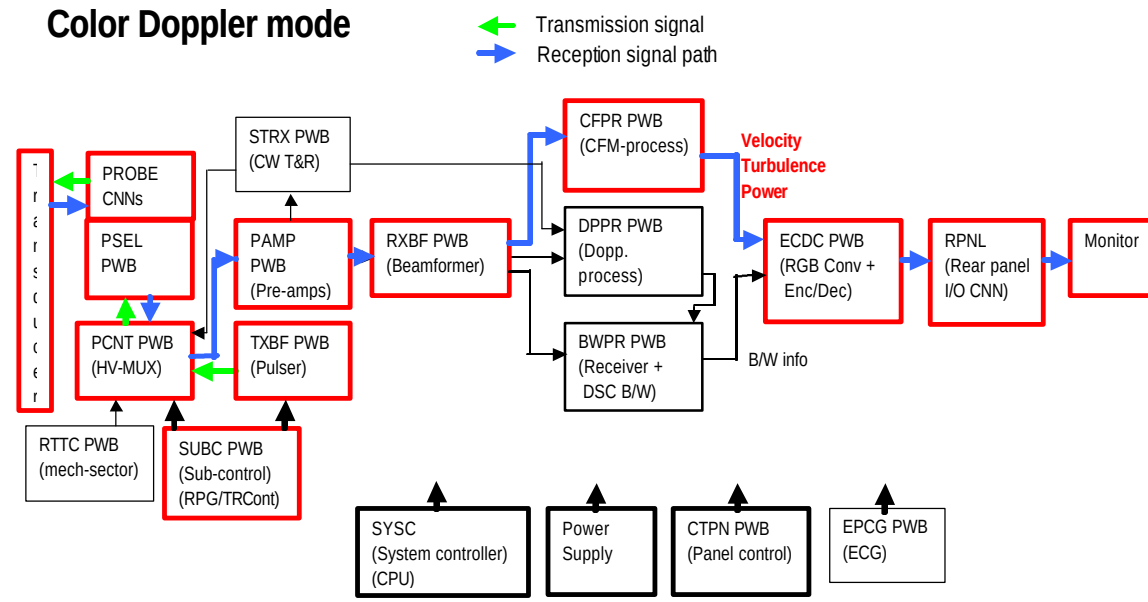
21.4

PW Doppler mode



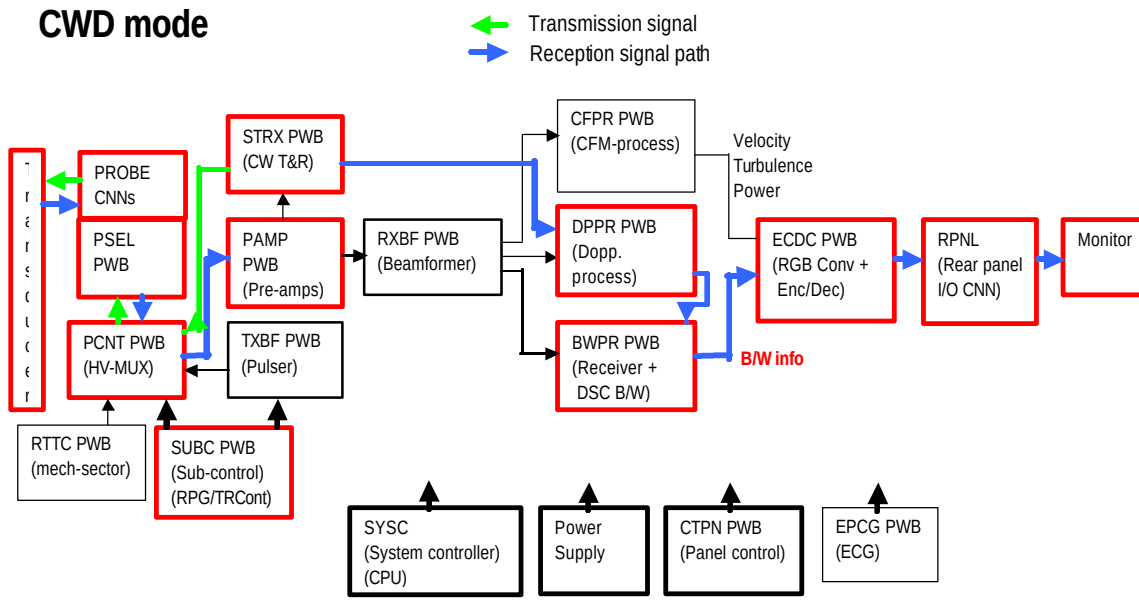
Note SYSC PWB, Power Supply parts, SUBC PWB and CTPN PWB (Main Panel) must be okay.

21.5



Note SYSC PWB, Power Supply parts, SUBC PWB and CTPN PWB (Main Panel) must be okay.

21.6



Note SYSC PWB, Power Supply parts, SUBC PWB and CTPN PWB (Main Panel) must be okay.

22. Board Unit functions - explanations

22.1 LNF This consists of the inlet, breaker, and A08 RCLM.
The A08 RCLM includes a line filter and an anti-inrush-current function.

22.2 PWX The power supply transformer includes a function for switching between the 100-V and the 200-V system.

22.3 SWRG This PWB includes a function for turning ON/OFF the DC voltage generation function of the system.
It also includes a circuit for switching the external option AC power supply (ON/OFF) in synchronization

22.4 RGLT This circuit includes a mechanism for distributing the DC voltage to each section of the system, a voltage monitoring function, a high-voltage regulator circuit, and an audio power amplifier.
DC voltages are supplied to the black-and-white monitor, operator, MO, FDD, and 5 fans. Connectors for supplying voltages are provided.
Voltage is supplied to the color monitor from the A03 SWRG.
DC voltages (+12 V, -10 V, and +5 V) are supplied to each card PWB via the A25 MTRB.
For +3.4 V, a cable from the A03 SWRG is connected directly to the A25 MTRB.

- Voltage monitoring function
  The DC voltages (+3.4 V, +5 V, -10 V, +12 V, +24 V, +155 V, -37 V, +BV) used for the system are monitored. (+BV: Transducer transmission voltage)
  The load current of the 5 fans is detected to confirm that the fans have not stopped.
- High-voltage regulator circuit
  This is a series regulator circuit for generating high voltages HV +155 V and HV -37 V from +180 V and -50 V.
- Audio power amplifier
  This is a power amplifier for driving the speaker in the monitor.
  Normally, switch S1 (SUB POWER SW) shown in figure below is set to OFF.
  When this switch is set to ON, the power supply of the main system can be set to ON by setting the main switch (breaker)
  on the rear of the main system to ON, regardless of the status of the standby switch on the left side of the main system.

22.5 HVPS Two pairs of DC-DC converter circuits are used to generate high voltages (+180 V, -50) and +BV (+145 V to +9 V) from the low voltage (+12 V).

22.6 CTPN This unit consists of the following 4 blocks.

1) CTPT Transmits switch information to the SYSC PWB when the main panel, sub-panel, keyboard switches, rotary encoder, and trackball are operated.
Controls ON/OFF of the panel switch LED by communication from the SYSC PWB.
Controls the STANDBY LED of the main panel.
When the power breaker is ON and the main switch is OFF, the LED blinks.
When the power breaker is ON and the main switch is ON, the LED lights.
When UIDM-500A shutdown processing is in progress, the LED blinks more rapidly that in <1> above.

2) MAP

3) SUBP

4) SKBD Keyboard control

22.7 EPCG This PWB includes the following functions because it amplifies the ECG signal for scroll display.

1) ECG isolation amplifier
2) DC amplifier input
3) PCG microphone input
4) Input selection
5) R-wave detection and ECG delay signal generation

22.8 PCAS For transducer connectors A and B (sector, linear, convex)

22.9 PCAX For transducer connector C (sector, linear, convex)

Transducer selection

Transducer ID detection

22.10 PCAA

- For transducer connector C (for M-TEE)
- Transducer selection
- Transducer ID detection

22.11 PCNT A high-voltage switch is mounted

22.12 PSEL

- PCAS, PCAX, and PCAA are mounted.
- Transducer selection

22.13 PAMP(RX64)

1. Amplifies echo signals.
2. CWRX, RX64, or RX32 is mounted.

a) CWRX

Pencil CW transmission/reception

SCW delay summation

b) RX64

c) RX32

22.14 TXBF

- Transmission pulse generation
- Z-CONV voltage generation
- High-voltage switch control signal generation
- Control of the F/E section such as PSEL, PCNT, etc.

22.15 STRX

- SCW (Steering CW Doppler) transmission
- SCW reception

22.16 RXBF

- Analog echo signal A/D conversion
- Addition and detection of echo signals after delay processing is performed according to the focus pattern.
- Handles signals for 32 channels per PWB.

PWB type

	RXBF A	RXBF B
Sector	Required	Required
Linear, convex	—	Required

22.17 LDB-BWPR

The functions of the LDB-BWPR PWB are the same as those of the BWPR PWB except for the following.

A line doubler, which virtually increases the number of acoustic lines, is provided in the filter FPGA.

22.18 BWPR
- Black-and-white image processing (dynamic range, edge enhancement, frame correlation, etc.)
- Image memory function
- Scan converter

22.19 SUBC
- Ultrasound transmission/reception timing control
- Beam direction control
- Generation of gain correction signal in the depth direction
- Detection of the scan angle and surface temperature of the multi-plane TEE transducer

22.20 CFPR
- Color signal processing (MTI filter auto-correlation)
- Color display processing (blank processing, VPT processing, color persistence)
- Image memory function (Two memory modules [either CMEM63 PWB or CMEM255 PWB])
- Scan converter
- The DPPR (Doppler signal processing) PWB is mounted.

PWB type

	CFPR PSP	CFPR QSP
PSP (2-way simultaneous processing)	Required	—
QSP (4-way simultaneous processing)	—	Required

22.21 DPPR
- PW/CW Doppler signal extraction
- Doppler auto trace arithmetic operation
- Doppler audio data generation
- ECG/PCG signal generation
- Image memory function

22.22 ECDC
- Composite display of black-and-white and color images
- Combination of graphics (auto data etc.)
- Video signal input and switching
- Video signal output and switching
- Down-conversion from non-interlaced to interlaced
- Doppler audio volume adjustment

22.23 RPNL
- External video signal input/output
- External communication input/output
- 3V indicator (LED for 10Base-T communication check)

22.24 SYSC
- The OS (Windows CE) is incorporated.
- Controls each unit by switch information from the CTPN PWB.
- Communicates with external devices via the communication interface.

23. System Clear method

23.1 ALL CLEAR function

1) Press PRESET D.. Switch
2) Select "PRESET" on the pull-down menu.
3) Select [System Configuration].
4) Press [Shift] + [<] to open Special System Configuration
5) Press [Shift] + [1] keys.
6) [ALL CLEAR] switch appears at the bottom / center of the menu screen.

The Back-up, Default, All Clear, Reload, Update and Restore - story on a Nemio V2.0

Please find the list below of all the User-Data items which are important in case of setting the system to 'Default' , All Clear, Reload or Update the System Software, Back-up and Restore the User-Data

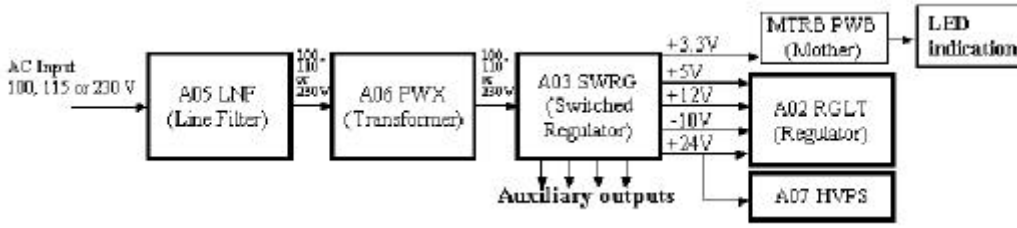
Back-up item	'Default' *1 button	'All Clear' *2 button	Reload or Update System Software	Back-up -> Restore*3 User-Data
Patient Data	Remains	Factory Default	Remains	Possible
Preset Data				
✓ System Configuration (+ Special)	Factory Default	Factory Default	Remains	Possible
✓ Key Custom (= User Function)	Factory Default	Factory Default	Remains	Possible
✓ Image process (2D + CDI)	Factory Default	Factory Default	Remains	Possible
✓ Scale Select (VRP curves)	Factory Default	Factory Default	Remains	Possible
✓ Exam presets (1 ~ 16) *4	Factory Default	Factory Default	Remains	Possible
✓ Measurement Registration *5	Remains	Factory Default	Remains	Possible
✓ OB preset registration	Factory Default	Factory Default	Remains	Possible
✓ Body Mark Custom	Factory Default	Factory Default	Remains	Possible
Image Creator				
✓ PIT	Remains*6	Remains*6	Factory Default	Possible *6
✓ CIP	Remians*6	Remains*6	Factory Default	Possible *6
Service				
✓ Information - Site	Remains	Factory Default	Remains	Possible
✓ Information - System	Remains	Factory Default	Remains	Not possible
✓ Information - Hardware	Remains	Factory Default	Remains	Possible*7
✓ Information - Software	Remains	Factory Default	Remains	Not possible
✓ Information - Peripheral	Remains	Factory Default	Remains	Possible
✓ Information - Configuration	Remains	Factory Default	Remains	Possible
✓ Test Tools Diagnostics	Remains	Factory Default	Remains	Not possible
✓ Maintenance - Service History	Remains	Factory Default	Remains	Possible
✓ Key History Log	Remains	Factory Default	Remains	Not possible
✓ Error Log	Remains	Factory Default	Remains	Not possible
✓ System use time	Remains	Factory Default	Remains	Not possible
✓ Transducer use time	Remains	Factory Default	Remains	Not possible
✓ System test result	Remains	Factory Default	Remains	Not possible
✓ System maintenance result	Remains	Factory Default	Remains	Not possible
✓ IQ Report	Remains	Factory Default	Remains	Not possible
Post process curve Edit	Factory Default	Factory Default	Remains	Not possible
Options	Remains	Disappears *8	Remains	Not possible

*1 : See picture 1 on next page
*2 : See picture 1 on next page
*3 : A back-up made on a V1.5 can be restored on a Nemio V2.0.
A back-up made on V2.0 van be restored on another Nemio V2.0
*4 : Includes all the items in picture 2 on next page
*5 : New in V2.0.
*6 : Can only be used by TMSE Application Specialists and the Factory. The back-up on Business Net contains these items, so they have to be Restored for better image quality.
*7 : The 'Automatic detected' hardware will not be overwritten
*8 : Options will disappear, but can be reloaded with the same MO's which were loaded before on this system

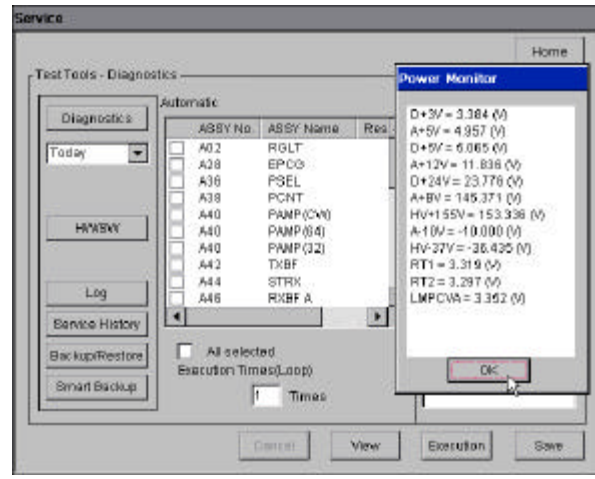
24. Power Supply unit LED

If it seems that there is no power: no monitor image and no panel operation, please check the following:

On the rear panel board (RPNL PWB) there is a 3.3 V indicator.
If this LED is ON, the following Power Supply parts are probably OK:
LNF, Transformer and SWRG PWB and HVPS.
So most probably the A02 RGLT PWB is broken



"Power Monitor" function is available
in Service menu - Test Tools - Diagnostics

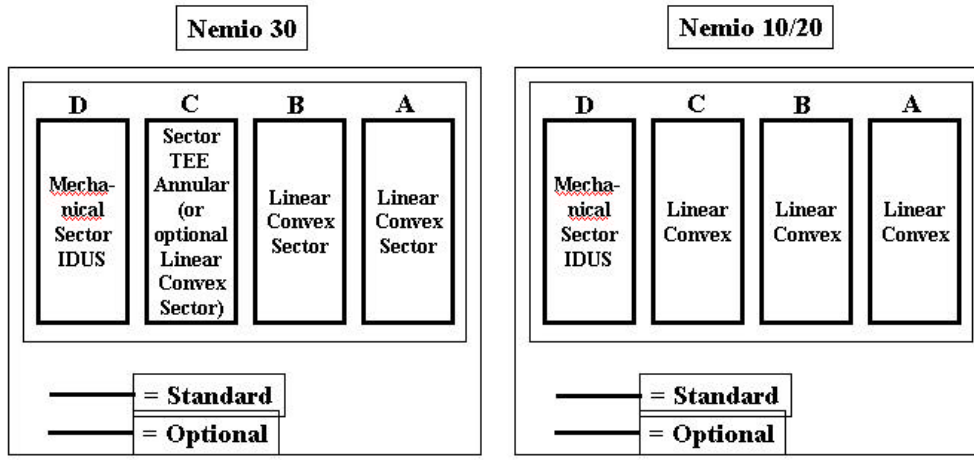


25. Key-top replacement

Change key-tops

26. Transducer (Probe) ports

26.1 Probe port usage (D port : Mechanical Sector IDUS is for the future expansion ; as of April '02)

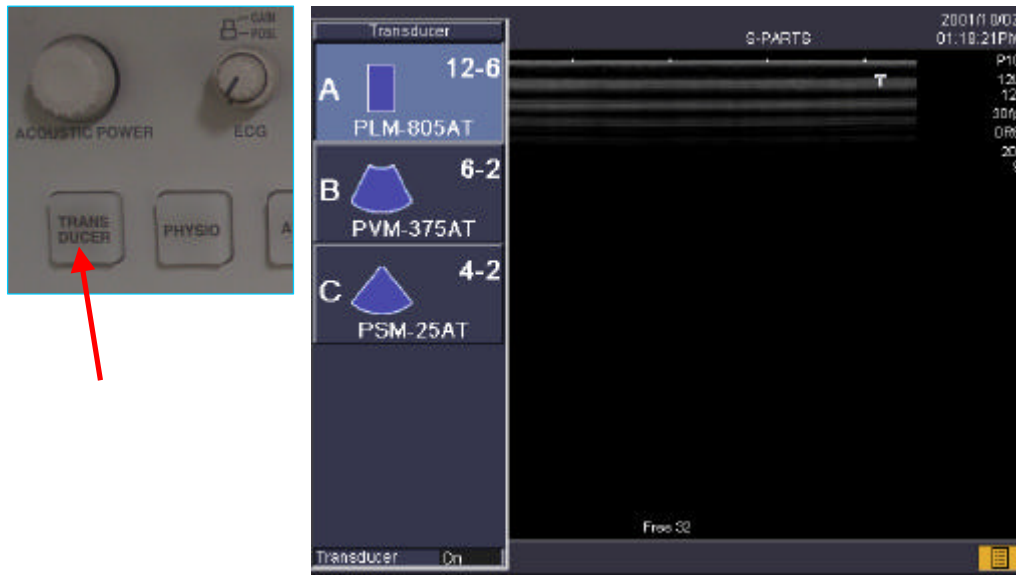


26.2 Connecting & Dis-connecting the Transducer

CAUTION:

Turn OFF the system sub switch or stop transmission by setting [Transducer] in the [Other] menu to OFF before connecting or disconnecting a transducer. If a transducer is connected or disconnected with an image displayed, the system and/or the transducer may malfunction.

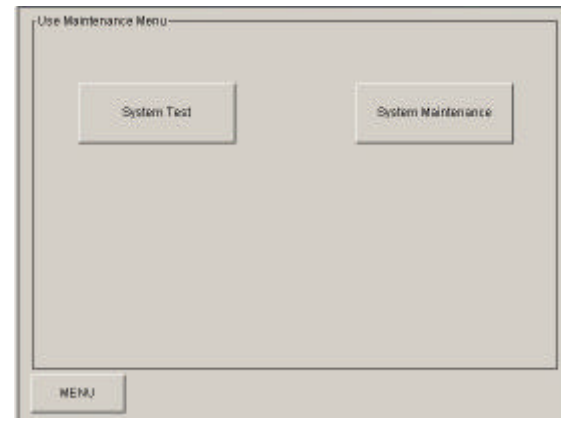
26.3 Transducer Selection menu



If 2 transducers are connected, you can select the other transducer directly with this button.
It is also possible to get the pop-up menu on the monitor. This can be set with a preset in the System Configuration : Transducer Select (Pop-up) or (Direct&Pop-up)

27. User Maintenance items

[PRESET D..] -> Preset -> Maintenance

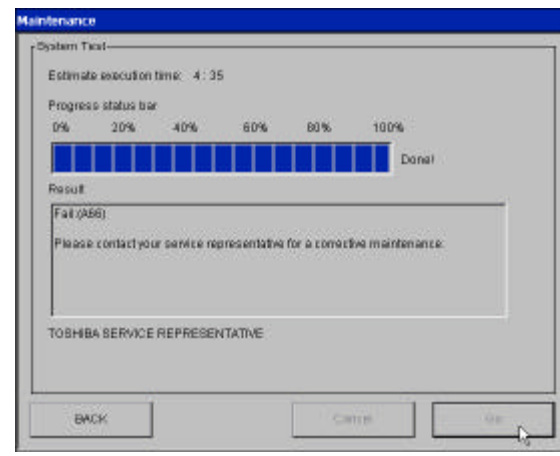


27.1 Maintenance for Customer - Menu

Select one of these buttons.
The appearance of these buttons
buttons depends on some Service settings.
Sometimes no buttons appear,
sometimes only one. Please refer to :
'Maintenance for the Service Engineer'

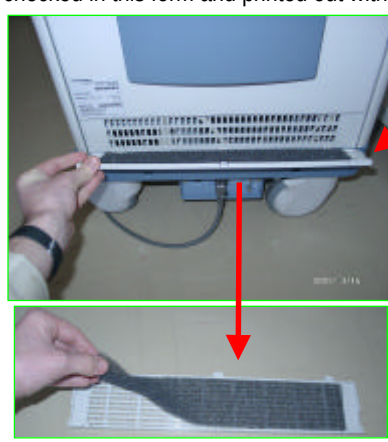
27.2 Maintenance for Customer - System Test

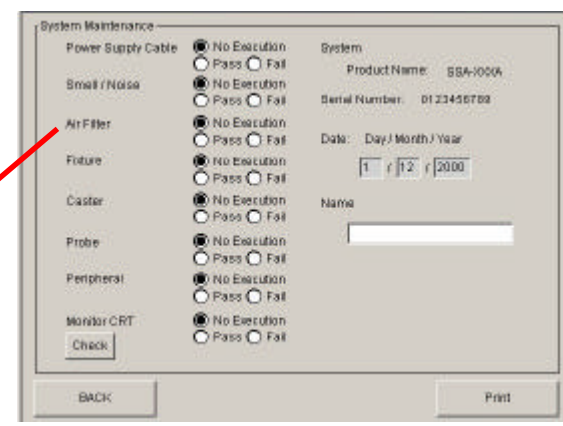
If the Customer selects the 'Go' button, the Diagnostic Self-tests will automatically be performed. The results will be a code which refers to the possible defective hardware. The customer can then inform the Service Engineer about this code.



27.3 Maintenance for Customer - System Maintenance

The customer can perform a periodical visual check on his system. The results can be manually checked in this form and printed out with a video printer.





28. Service Maintenance items

[PRESET D..] -> Preset -> Maintenance -> [Shift] and [<] -> password "oimeN" (last "N" capital letter) -> [OK]

28.1 Service menu items : For the details, refer to 2D730-1511E Service manual [Maintenance Menu Volume]

Item	Information				Test Tools
	Site	System	HW/SW	Configuration	Diagnostics
	Hospital	Serial Number	Hardware	Service Representative	Automatic
	Street	System Use Time	Software	Tel No.	Monitor/VCR
	Street No.	Inspection Schedule	Peripheral	User Maintenance Menu	Operation Panel
	Zip Code	Service Use Time	View	View	Speaker
	Phone No.	Installed date	Input	Input	Power Monitor
	City	Maintenance contract	Save	Save	Cancel
	District	View			View
	Country	Input			Execution
	Site-Name	Save			Save
	Location				
	Name				
	ID				
	Memo				
	View				
	Input				
	Save				

In HW/SW menu, it is possible to display the board part numbers. It is useful because you will be able to check the board part numbers without opening the covers.

Item	Maintenance			Utilities
	Log	Report	Service History	Color Adjust
	Key History Log	IQ Report	History List	B&W Pattern
	Error Log	- Key History Log,	Enforcement day	Framing B&W Gray Scale Pattern
	System Use Time	- Error Log	Service Engineer Name	Color Bar Pattern *1
	Transducer Use Ti	- Image Data Viewer	Key1	Color Scale Pattern *1
		- System Use Time	Key2	*1: These patterns cannot be displayed in black-and-white systems.
		- Transducer Use Time	Key3	
		System Test Result	Key4	
		System Maintenance Result	Key5	
			Memo	
			View	
			Input	
			Save	

Item	Short-Cut menu		
	Backup/Restore	Software Install/Remove	Smart Backup
	Command	Command	Drive
	Drive	Drive	Progress status bar
	Packages	Option Software	Go
	Estimate execution time	Estimate execution time	
	Progress status bar	Progress status bar	
	Cancel	Cancel	
	Go	Go	

29. Shipment Data Sheet (SDS)

Note For the latest SDS, contact to the proper section for update.

Slot Code	Part name	Part number	1532001~		157xxxx~	1602881~	Exxxxxxx	Fxxxxxxx
A02	RGLT	BSM31-3062	-	A	A	A	A	A
A03	SWRG	BSM31-3063	-	-	A	A	A	A
A05	LNF/A	BSM31-3064	-	-	-	-	-	-
A05	LNF/E	BSM31-3065	-	-	-	-	-	-
A05	LNF/J	BSM31-3066	-	-	-	-	-	-
A06	PWX	BSM31-3068	-	-	A	A	A	A
A07	HVPS	BSM31-3069	-	A	A	A	A	A
A10-1	CPCT	BSM31-3070	-	A	A	A	A	A
A10-2	MANP	BSM31-3071	-	-	-	-	-	-
A10-3	SUBP	BSM31-3072	-	-	-	-	-	-
A10-6	PALM	BSM31-3075	-	-	-	-	-	-
A10-7	KBDL	BSM31-3076	-	-	-	-	-	-
A10-8	SKBD	BSM31-3078	-	-	-	-	-	-
A14	BMON	BSM31-3079	-	-	-	-	-	-
A15	CMON	BSM31-3080	-	-	-	-	-	-
A16	FANF	BSM31-3081	-	-	-	-	-	-
A17	FANB	BSM31-3082	-	-	-	-	-	-
A21	BPK	BSM31-3083	-	-	-	-	-	-
A25	MTHR	BSM31-3084	-	-	-	-	-	-
A26	FDDV	BSM31-3085	-	-	-	-	-	-
A27	MODV	BSM31-3086	-	-	-	-	-	-
A27-1	FANM	BSM31-3155	-	-	-	-	-	-
A28	EPCG	BSM31-3087	-	-	-	-	-	-
A30	PCAS	BSM31-3088	-	-	-	-	-	-
A32	PCAX	BSM31-3089	-	-	-	-	-	-
A33	PCAA	BSM31-3090	-	-	-	-	-	A
A34	PCMS	BSM31-3091	-	-	-	-	-	-
A36	PSEL	BSM31-3092	-	-	-	-	-	-
A38	PCNT	BSM31-3093	-	-	-	-	-	A
A40	PAMP(CW)	BSM31-3094	-	-	-	-	-	-
A40	PAMP(64)	BSM31-3095	-	-	-	-	-	-
A40	PAMP(32)	BSM31-3096	-	-	-	-	-	-
A42	TXBF	BSM31-3097	-	A	A	A	A	B
A44	STRX	BSM31-3098	-	A	A	A	A	A
A46	RXBF A	BSM31-3099	-	-	A	A	A	A
A46	RXBF B	BSM31-3100	-	-	A	A	A	A
A48	BWPR63	BSM31-3101	-	-	-	To New		(*A service parts)
A48	BWPR63(Line Doubler)	BSM31-3706				-	-	-
A48	BWPR255	BSM31-3102	-	-	-	To New		(*A service parts)
A48	BWPR255(Line doubler)	BSM31-3707				-	-	-
A48-1	BWPX	BSM31-3103	-	-	-	-	-	-
A50	SUBC	BSM31-3104	-	A	A	A	A	A
A56	CFPRTH		-	-	-	-	-	-
A56	CFPR63	BSM31-3105	-	-	-	-	-	-
A56	CFPR255	BSM31-3106	-	-	-	-	-	-
A56	CFPR(QSP)	BSM31-3708	-	-	-	-	-	-
A56-1	DPPR	BSM31-3107	-	A	A	A	A	A
A66	ECDC(BW)	BSM31-3108	-	A	C	C	C	C
A66	ECDC(Color)	BSM31-3109	-	A	C	C	C	C
A68	ECDC3 (new)	BSM31-3885					(option)	A
A68	RTTC	BSM31-3110	-	-	-	-	-	-
A69	RPNL	BSM31-3111	-	-	-	-	-	-
A70	SYSC	BSM31-3112	-	-	A	A	A	A
A86	RHCP	BSM31-3203	-	-	-	-	-	-
A86	FSCP	BSM31-3295	-	-	-	-	-	-
A66-3	ECDX3 (option)	BSM31-3887						-
A69	RPNL2 (option)	BSM31-3888						-
A68	RTTC (option)	BSM31-3110						-
Software version			1.00	1.00	1.50	2.00	2.1.000A	V3.0

V2.1 applied by FMI basis

30. Presets

Note Check with operation manual for the detailed function of each preset menu items.

CONDITION PRESET (V3.0 level)

2D	ITEM	Parameters
	Initial Start Mode	2D Single, 2D Dual
	B/W Gain	62,･･･72,74,76,78,80,82,84,86,88,･･･100
	Frequency Select	T1,T2,2D1,2D2,2D3
	Multi Frequency	T1,T2,2D1,2D2,2D3
	High Frame	Off, On, C=ON
	Density	L,H
	Focal Pattern	1,2,3,4,5
	Initial Focal Position	25,50,75,100
	2D IP No.	1,2,3,4,5,6,7,8
	2D IP Type	A,B,C,D,E
	THI IP No.	1,2,3,4,5,6,7,8
	THI IP Type	A,B,C,D,E
	2D Map Valid	Off,On
	2D Map	1,2,3,4,5,6,7
	Reject	OFF,1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
	2D Oblique Angle	L1 , C , R1
	2D Scan Range	W,M,N,WM
	2D S. Range Adj.	Off,On
	Left/Right	L,R
	Upside/Down	U,D
	Rotation	0, 90, 180, 270
	B/W VBS Gain	1, 2, 3, 4, 5, 6, 7
	Gate Display	Off,On
	Grayscale Display	Off,On
	Time Smooth Type	A, B

CONDITION PRESET

M	ITEM	Parameters
	M Gain Comp.	-20,-19,･･･0･･･,+19,+20
	D/M Speed	x1, x2, x4, x8
	M DR	30,35,40,45,50,55,60,65,70
	M AGC	0,1,2,3
	M E. Enhance	Off,1,2,3
	M Map Valid	Off,On
	M Map	1,2,3,4,5,6,7
	M Max Sampling	OFF, 1, 2, 3
	Gate Mark on Edge	Off,On

PW/CW	ITEM	Parameters
	Initial Gate Size	1,2,3,5,7,10,15
	Gate Color	WHT,RED,GRN,BLUE,YEL,CYAN,MAG
	HPRF Gate Display	On,Off
	PW Gain	1-30 (1 step)
	CW Gain	1-30 (1 step)
	PW PRF	1.3,1.5,1.7,1.9,2.1,2.3,2.5,2.7,3.0,3.3,3.6,4.0,4.4,4.8,5.3,5.8,6.4,
		7.1,7.8,8.6,9.4,10.4,11.4,12.5,13.8,15.2,16.7,18.4
	PW Filter	1,2,3,4,5,6,7
	PW Pixel Ratio	0.7,1.0,1.3,1.7,2.0,3.0,4.0
	PW Contrast	0,1,2,3
	PW Average	Off,1,2,3,4,5,6,7
	PW Post Proc.	OFF 0,1,2,3,4,5,6,7
	CW PRF	4.0,4.4 ,4.9, 5.4, 5.9, 6.6, 7.3, 8.0, 8.8, 9.8, 10.8, 11.9, 13.1,
		14.5, 16.0, 17.7, 19.5, 21.5, 23.8, 26.3, 29.0, 32.0, 35.3, 39.0, 43.1,47.6
	CW Filter	1,2,3,4,5,6,7
	CW Pixel Ratio	0.7,1.0,1.3,1.7,2.0,3.0,4.0
	CW Contrast	0,1,2,3
	CW Average	OFF,1,2,3,4,5,6,7
	CW Post Proc.	OFF 0,1,2,3,4,5,6,7
	D Map Valid	Off,On
	D Map	1,2,3,4,5,6,7
	2D/D Expand	Off,On
	D Expand	Off,On
	D Max Velocity	Area Max , DIV. Max
	PW Oblique Angle	L3,L2,L1,C,R1,R2,R3
	Velocity/Frequency	Velocity , Frequency
	Base Line	U4,U3,U2,U1,0,L1,L2,L3,L4
	D/M Time Mark	Off,On
	Angle Mark	Off,On
	Angle Correction	L80,L70,L60,L50,L40,L30,L20,L10,0R10,R20,R30,R40,R50,R60,R70,R80
	2D Refresh Mode	MAN,TMR 1 ,TMR2.TMR3,TMR4,ECG
	Trace Range	Full,Up,Low
	Trace Peak	Off,On
	Trace Mode	Off,On
	Trace Mean	Off,On
	Trace Threshold	25,50,75,100,125,150,175,200,225,250
	Trace Smooth	Off,1,2,3,4,5,6,7,8,9,10,11,12
	PW Sound Type	1,2,3,4,5,6,7,8,9,10
	CW Sound Type	1,2,3,4,5,6,7,8,9,10
	D Auto Scale	Scale Only , Scale & Shift
	D Auto Scale Mode	Man, 1EOS, 2EOS, 3EOS, 4EOS
	D Auto Scale Time	1sec, 2sec, 4sec, 8sec
	Range Coef.	1.1,1.2,1.3,1.4,1.5
	Peak Display	Off,On

CONDITION PRESET

CDI	ITEM	Parameters
	CDI Gain	8,9,10,11,12,13,14,15,16,17,18,19, 20,21,22,23,24,25,26
	Multi. Frequency	CD1,CD2
	Scale Cut Off	Off,Low,High
	Balance	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16
	Initial Scale No.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19,
		20, 21, 22, 23, 24, 25, 26, 27, 28,29, 30, 31, 32, 33, 34, 35
	Scale	4,10,15,20,25,30,35,40,45,50,60,80,100
	PSP/QSP	Off,2,4
	Density	L,M,H,SH
	High Reso.	Off, On
	CDI/FFT Reverse	Off, On
	C Map Select	V-T1, V-T2, V-T3, T, P, HUE1, HUE2, HUE3,
		HUE4, HUE5, HUE6, SAT1, SAT2, SAT3
	C Initial Map	V-T1, V-T2, V-T3, T, P, HUE1, HUE2, HUE3,
		HUE4, HUE5, HUE6, SAT1, SAT2, SAT3
	C Contrast	1,2,3,4
	Base Line Type	A,B
	Wide (2D)	Off, On
	C IP Type Sel	Adult-Heart,M-TEE,Coronary,P-Heart,Carotid,PV-Artery,PV-Vein
		S-Parts,TCD,Abd-Gen,Abd-Ped,OB/Gyn,EV/ER,F-Heart,User1
		User2,User3,User4,User5,User6
	C IP No.	1,2,3,4,5,6,7,8
	Filter	1, 2, 3, 4, 5, 6, 7, 8
	Data No.	L, M, H
	ROI Focal Position	0,10,20,30,40,50,60,70,80,90,100
	ROI Axis Position	Top,Middle,Bottom
	ROI Height	100,80,60,40
	ROI Width	100,90,80,70,60,50,40,30,20,10
	Back Display	Off, On
	Scale Graph Display	Off, On
	C Oblique Angle	L3,L2,L1,C,R1,R2,R3
	MCDI+CDI Simult	Simult Off , MCDI
	Capture	On,Off
	Capture Time	MAN,1,2,3,4,5
	MAX PRF	1.3,1.5,1.7,1.9,2.1,2.3,2.5,2.7,3.0,3.3,3.6,4.0,4.4,4.8
		5.3,5.8,6.4,7.1,7.8,8.6,9.4,10.4,11.4,12.5
	PRF Control Mode	Off, On
	M.A.E.	1,2,3,4

CONDITION PRESET

Power	ITEM	Parameters
	Power Gain	8,9,10,11,12,13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26
	Scale Cut Off	Off,1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15、 16
	Balance	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16
	Initial Scale No.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19,
		20, 21, 22, 23, 24, 25, 26, 27, 28,29, 30, 31, 32, 33, 34, 35
	Scale	4,10,15,20,25,30,35,40,45,50,60,80,100
	PSP/QSP	Off,2,4
	Density	L,M,H,SH
	High Reso.	Off, On
	P IP Type Sel	Adult-Heart,M-TEE,Coronary,P-Heart,Carotid,PV-Artery,PV-Vein,S-Parts
		CD,Abd-Gen,Abd-Ped,OB/Gyn,EV/ER,F-Heart,User1
		User2,User3,User4,User5,User6
	P IP No.	1,2,3,4,5,6,7,8
	Filter	1, 2, 3, 4, 5, 6, 7, 8
	Data No.	L, M, H
	P Map Select	P1,P2,P3,P4,dP1,dP2,dP3,dP4
	P Initial Map	P1,P2,P3,P4,dP1,dP2,dP3,dP4
	P DR	10,15,20,25,30,35,40,50,60,70
	P Contrast	1,2,3,4
	ROI Focal Position	0,10,20,30,40,50,60,70,80,90,100
	Back Display	Off, On
	M.A.E.	1,2,3,4
TDI	ITEM	Parameters
	TDI Gain	8,9,・・・,26 (1 step)
	Scale Cut Off	Off, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16
	Density	L,M,H,SH
	Balance	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16
	Scale	2,4,6,8,10,12,14,16,18,20
	PSP/QSP	Off,2,4
	TDI IP Type Sel	Adult-Heart,M-TEE,Coronary,P-Heart,Carotid,PV-Artery,PV-Vein
		S-Parts,TCD,Abd-Gen,Abd-Ped,OB/Gyn,EV/ER,F-Heart,User1
		User2,User3,User4,User5,User6
	TDI IP	1,2,3,4,5,6,7,8
	Data No.	L, M, H
	TDI Map Select	VT1, VT2, VT3, T, P, HUE1, HUE2, HUE3, HUE4, HUE5
		HUE6, SAT1, SAT2, SAT3
	TDI Initial Map	VT1, VT2, VT3, T, P, HUE1, HUE2, HUE3, HUE4, HUE5
		HUE6, SAT1, SAT2, SAT3
	TDI Contrast	1,2,3,4
	ROI Focal Position	0,10,20,30,40,50,60,70,80,90,100
	ROI Axis Position	Top,Middle,Bottom
	ROI Height	100,80,60,40
	ROI Width	100,90,80,70,60,50,40,30,20,10

CONDITION PRESET

ACM	ITEM	Parameters
	ACM Gain	8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26
	Initial Scale No.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19,
		20, 21, 22, 23, 24, 25, 26, 27, 28,29, 30, 31, 32, 33, 34, 35
	Scale	4,10,15,20,25,30,35,40,45,50,60,80,100
	Filter	1, 2, 3, 4, 5, 6, 7, 8
	M.A.E.	1,2,3,4
	PSP/QSP	Off,2,4
	Density	L,M,H,SH
	High Reso.	Off, On
	Data No.	L, M, H
	CDI / FFT Reverse	Off, On
	ACM Map Select	VT1, VT2, VT3, T, P, HUE1, HUE2, HUE3, HUE4, HUE5
		HUE6, SAT1, SAT2, SAT3
	ACM Initial Map	VT1, VT2, VT3, T, P, HUE1, HUE2, HUE3, HUE4, HUE5
		HUE6, SAT1, SAT2, SAT3
	ACM Contrast	1,2,3,4
	Wide(2D)	Off, On
	Balance	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16
	Back Display	Off, On
	ROI Height	100,80,60,40
	ROI Width	100,90,80,70,60,50,40,30,20,10
	ROI Focal Position	0,10,20,30,40,50,60,70,80,90,100
	ACM IP Type Select	LVOT,MITRAL,PULM,TEE,PED-LVOT,PED-MITRAL,PED- PULM
	ACM IP No.	1,2,3,4,5,6,7,8

<Memo>

CONDITION PRESET

DynamicFlow	ITEM	Parameters
	Dyna Gain	8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26
	Dyna Gain Comp.	-6,-4,-2,0
	Multi Frequency	Dy1,Dy2
	Data No.	L,M,H
	Initial Scale No.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19,
		20, 21, 22, 23, 24, 25, 26, 27, 28,29, 30, 31, 32, 33, 34, 35
	Scale	4,10,15,20,25,30,35,40,45,50,60,80,100
	Filter	1, 2, 3, 4, 5, 6, 7, 8
	MAE	1,2,3,4
	PSP/QSP	Off,2,4
	Density	L,M,H,SH
	High Reso.	On,Off
	Dyna IP Type Select	Dflow-A,Dflow-B,Dflow-C,Dflow-D,Dflow-E
	Dyna IP No.	1,2,3,4,5,6,7,8
	Dyna Map Select	DF1,DF2,DF3,DF4,DF5,DF6,DF7,DF8
	Dyna Initial Map	DF1,DF2,DF3,DF4,DF5,DF6,DF7,DF8
	Dyna DR	10,15,20,25,30,35,40,50,60,70
	ROI Focal Position	0,10,20,30,40,50,60,70,80,90,100
	ROI Axis Position	Top,Middle,Bottom
	ROI Height	100,80,60,40
	ROI Width	100,90,80,70,60,50,40,30,20,10

CONDITION PRESET

CI-2D	ITEM	Parameters
	CI-2D Gain	62,･･･72,74,76,78,80,82,84,86,88,･･･100
	Frequency Select	CH1,CH2,2D1,2D2,2D3
	Multi Frequency	CH1,CH2,2D1,2D2,2D3
	High Frame	Off, On, C=ON
	Density	L,H
	CI IP Type	A,B,C,D,E
	CI IP No.	1,2,3,4,5,6,7,8
	2D Map Valid	On,Off
	2D Map	1,2,3,4,5,6,7,8
	Reject	Off,1,2,3,4,･･･
	Focal Pattern	1,2,3,4,5
	Focal Position	25,50,75,100

CONDITION PRESET

CI-Power	ITEM	Parameters
	CI-Power Gain	8,9,10,11,12,13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26
	Multi Frequency	CH1,CH2,CD1,CD2
	Scale Cut Off	Off,1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15、16
	Balance	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16
	Data No.	L, M, H
	Initial Scale No.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19,
		20, 21, 22, 23, 24, 25, 26, 27, 28,29, 30, 31, 32, 33, 34, 35
	Scale	4,10,15,20,25,30,35,40,45,50,60,80,100
	Filter	1, 2, 3, 4, 5, 6, 7, 8
	M.A.E.	1,2,3,4
	PSP/QSP	Off,2,4
	Density	L,M,H,SH
	High Reso.	Off, On
	CI-P IP Type Sel	Adult-Heart,M-TEE,Coronary,P-Heart,Carotid,PV-Artery,PV-Vein
		S-Parts,TCD,Abd-Gen,Abd-Ped,OB/Gyn,EV/ER,F-Heart,User1
		User2,User3,User4,User5,User6
	CI-P IP No.	1,2,3,4,5,6,7,8
	CI-P Map Select	P1,P2,P3,P4,dP1,dP2,dP3,dP4
	CI-P Initial Map	P1,P2,P3,P4,dP1,dP2,dP3,dP4
	CI-P Contrast	1,2,3,4
	CI-P DR	10,15,20,25,30,35,40,50,60,70
	ROI Focal Position	0,10,20,30,40,50,60,70,80,90,100
	Back Display	Off, On
CI-DynaFlow	ITEM	Parameters
	CI-Dyna Gain	8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26
	CI-Dyna Gain Comp.	0,-2,-4,-6
	Multi Frequency	Dy1,Dy2
	Data No.	L,M,H
	Initial Scale No.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19,
		20, 21, 22, 23, 24, 25, 26, 27, 28,29, 30, 31, 32, 33, 34, 35
	Scale	4,10,15,20,25,30,35,40,45,50,60,80,100
	Filter	1, 2, 3, 4, 5, 6, 7, 8
	MAE	1,2,3,4
	PSP/QSP	Off,2,4
	Density	L,M,H,SH
	High Reso.	On,Off
	CI-Dyna Map Select	DF1,DF2,DF3,DF4,DF5,DF6,DF7,DF8
	CI-Dyna Initial Map	DF1,DF2,DF3,DF4,DF5,DF6,DF7,DF8
	CI-Dyna DR	10,15,20,25,30,35,40,50,60,70
	CI-Dyna IP Type Select	DFlow-A,DFlow-B,DFlow-C,DFlow-D,DFlow-E
	CI-Dyna IP No.	1,2,3,4,5,6,7,8
	ROI Focal Position	0,10,20,30,40,50,60,70,80,90,100

FEI	ITEM	Parameters
	Monitor	On,Off
	Monitor Frequency	2D1,2D2,2D3,2D4
	Monitor Level	1,2,3
	Flash Nun.	1,2,3,4
	Interval Time	0.2, 0.5, 1.0, 3.0, 5.0, 7, 10, 20, 30, 40, 50, 60
	Subtraction	Type1,Type2
	Auto Rec.	On,Off
	ECG Count	1,2,3,4,5,6,7,8,9,10,15, 20,25,30,35,40,45,50,55,60
	Trigger Mode	Interval, ECG
	ECG with Monitor	On,Off
OTHER	ITEM	Parameters
	Initial Power(%)	100,95,90,・・・,10,5
	Initial Power(%)	100,95,90,・・・,10,5
	Depth	2,3,4,5,6,8,10,12,15,17,20,24
	Depth Control Setting	Standard,Fine
	Depth Value Display	Off,On
	Initial Transducer	A, B, C, D, Pencil
	2D ECG Display	Off,On
	ECG Position	Upper, Lower
	ECG Sync Mode	Single , Dual , AD+50 , AD+100 , TMR
	ECG Sync + Real	Off,On
	ECG CH2 Delay	180, 190, 200, 280, 290, 300, 310, 320
	Interval Time	Off,0.1,0.2,0.5,1.0,2.0,3.0,4.0
	HR Display	Off,On
	2D PCG Display	Off,On
	PCG Gain	10,9,8,7,6,5,4,3,2,1
	PCG Position	10,9,8,7,6,5,4,3,2,1
	Annotation Real	Off,On
	Body Mark Real	Off,On
	Body Mark Mode	Off,On
	Freeze Mode	Body Mark , Cine
	Cine Icon Display	Off,On
	Indipendent Oblique Scan	CDI+PW , CDI or PW
	Pan/Zoom Image	2D , 2D&M
	Needle Guide Display	Needle Off,Off,On
	Needle Guide Size	Small,Midium,Large
	Needle Range Display	Off,On
	OB Data on ID	Off,On
	Blood Pressure on ID	Off,On
	Auto Data Disp.	Off,On
	2D/M Display Format	Rt/Lt,Up/Down 1/2,Up/Down 2/3
	Menu On Cine Mode	Cine , Other
	Condition M+2D	2D Real , 2D Freeze
	User Function Type	A, B,C

SPECIAL CONDITION OF EXAM PRESET (SHIFT + ,)

Special Condition	ITEM	Parameters
	Power On	Real , Freeze
	Pan Zoom/Spot Zoom	Pan Zoom , Spot Zoom
	Spot ROI Axis Position	Top,Middle,Bottom
	Spot ROI Height	100,80,60,40
	Spot ROI Width	100,90,80,70,60,50,40,30,20,10
	DMU Start Apli. Select	Routine , Program , Stress , 3D
	2D Record Mode	Auto , Dual
	2D Store Mode	Off,1,2,3
	2D Store / FEI	2D Store , FEI
	Programmable VRP	On,Off

SYSTEM CONFIGURATION PRESET

System Configuratio	ITEM	Parameters
	Condition Preset	A,B,C
	Transducer Select	Popup, Direct&Popup
	BSA Calculation Area	Oriental,Occidental
	Scrol l Bar Width	18～50
	Preset Key A	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16
	Preset Key B	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16
	Preset Key C	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16
	Image File Format	BMP,Jpeg,BMC
	Compression Quality	L, M, H (compression L = 1/5, M=1/10, H=1/20) : only after V3.0
	Buzzer	Off,1,2,3,4,5,6,7
	Panel Light	100,75,50,25
	Image File with ECG	Off,On
	Depth Key Wait Time	1,2,3,4,5
	Caliper Font Size	Small,Medium,Large
	Measure Window	Hide , Stay

SPECIAL CONFIGURATION OF SYSTEM PRESET (SHIFT + ,)

Special Configuration	ITEM	Parameters
	A.P.Gain Comp	Coupled , Independent
	Depth Rotate	Left , Right
	FFTSmooth	Off,1,2
	Freeze Shutter	Freeze Only,Freeze/Real
	FRZ VCR Condition	Record , Pause
	Character Size	8,9,10,11,12,13,14,15,16,17,18
	Character Brightness	1,2,3,4
	Brightness Selection	Low,High
	Select Key Mode	Cyclic Off,Cyclic On
	Date Format	（DD/MM/YYYY）（MM/DD/YYYY）（YYYY/MM/DD）
	Echo Base	Off,1,2,3
	Entry System	Metric,English
	Language	GB, F ,D,USA,E,I,DK,NL,N,S,SF,P,ICE
	Time Format	12H , 24H
	ID Disp Format	2items , 4items
	TEE Icon Display	Off,On
	Auto Print and MO	Off,On
	US Start Select	US,DMU
	DMU Record Select	US,DMU
	Back Ground C	Off,1,2,3
	Single Back C	A,B
	Play Back Code	Off,On
	Disk Select	FDD,MOD
	COM1 Protocol	VCR-P,VCR-S,MOD,DMU,ALPHA,IMP,MK,Other
	COM1 bps	1200,2400,4800,9600,19200
	COM1 Check Sum	（Off） （On）
	COM1 Communication	(Display Off)(Display On)
	COM2 Protocol	VCR-P,VCR-S,MOD,DMU,ALPHA,IMP,MK,Other
	COM2 bps	1200,2400,4800,9600,19200
	COM2 Check Sum	（Off） （On）
	COM2 Communication	(Display Off)(Display On)
	COM3 Protocol	VCR-P,VCR-S,MOD,DMU,ALPHA,IMP,MK,Other
	COM3 bps	1200,2400,4800,9600,19200
	COM3 Check Sum	（Off） （On）
	COM3 Communication	(Display Off)(Display On)
	Window Type	Animation,Normal
	Line Command	Off,On
	SCSI Color Printer	Off,On
	Printer Mode	Other , CP750A
	NAK	0x15,0x0F
	Caps Lock	Off,On
	Folder Format	ID , Date

SPECIAL CONFIGURATION OF SYSTEM PRESET (SHIFT + ,)

Special Configuration	ITEM	Parameters
	Auto Message	All Phases , Final Phase
	RGB1 Output Form.	DMU,Interlace
	Subtraction Display	Off,On

MEASUREMENT PRESET

	Item	parameter
General	CH Display	Off,On
	Window Back	Off,On
	Decimal Point	.（Period）, ,（Comma）
	Heart Beat	1,2,3,4,5,6,7,8
	Vel Histo Band Width	-3dB, -6dB
	BSA Calcuration Age	ADULT,PEDI 12-14,PEDI 6-11,PEDI 1-5,PEDI 0
	Joint Baseline	Right-Left , Left-Right
	All Display	Off,On
	Measure Real (Dual)	Off,On
	Trace Length Method	Trace All, Trace Spline
	Active Display	Current,All
Application	Title Display	Off,On
	Window Back	Off,On PART ON
	Auto Average	Off,On
	Report Edit Mark	Off,On
	All Display	Off,On
	Measure Real	Off,On
	HR Method	ECG,D/M
	F Vol Vel Trace Type	Cardiac, Vascular
	Gravity	1.00,1.05,1.06
Unit	Distance	mm, cm
	Area	mm2, cm2
	Time	ms, s
	Slope	mm/s, cm/s
	Velocity	cm/s, m/s
	Accel	cm/s2, m/s2
	VTI	ｃｍ , ｍ
LV(2D)	Method	Single Plane Ellipse, Biplane Ellipse, Bullete, Simpson, Cube
		Teichholz, Gibson, Simpson BP, Simpson SP
	Sequence Type	1,2
	Default Angle	90, 80, 70, 60, 50, 40, 30, 20, 10, 0
		-10, -20, -30,-40, -50, -60, -70, -80, -90
	Simpson SP BP Trace	All, Spline
	Simpson BPMeas Real	Off,On
	BP Mark position	Same Image,Other Image,Center
LV(M)	Method	Cube, Teichholz, Gibson
	Sequence Type	1,2

MEASUREMENT PRESET

	Item	parameter
Area Method	General	Trace All, Trace Spline, Ellipse, Cross
	LV	Trace All, Trace Spline, Ellipse, Cross
	%Stenosis	Trace All, Trace Spline, Ellipse, Cross
	Conti Equation	Trace All, Trace Spline, Ellipse, Cross
	F Vol VTI	Trace All, Trace Spline, Ellipse, Cross
	F Vol Vel Trace	Trace All, Trace Spline, Ellipse, Cross
Mean Valocity	Mitral	V*HR/60,V/T
	Aortic	V*HR/60,V/T
	Tricuspid	V*HR/60,V/T
	Pulmonary Valve	V*HR/60,V/T
	Pulmonary Vein	V*HR/60,V/T
	F Vol Vel Trace	V*HR/60,V/T
ACM	Average Display	Off,On
	SI,CI Display	Off,On
	ROI Width	-2,-1,0,+1,+2
	ROI Height	-1,0,+1
Velocity Trace	Method	All, Spline
	Manual Trace	Off,On
	Trace Line Display	VPEAK,VPEAK+VMEAN
	Mean Velocity	V*HR/60,V/T
	Auto Point	Off,On
	PI	VED,VMIN
	RI	VED,VMIN
	FVOL	VM_P,VM_M
Other	Trace Line Display	Soid, Broken
	Mark Size	Small,Midium,Large
OB	LMP/EDD	LMP, EDD, ＩＶF, User
	PRV/CLN	PRV, CLN, User
	Week Format	ｗｄ,ｗ ｔ,ｗ ｄ, ． ｗ
	Area Method	Trace All, Trace Spline, Ellipse,Cross
	SD Display	Off,On
	GA Display	Off,On
	U/S Display	Off,On
	Result Min Display	Off,On
	All Display	Off,On
	Graph	Off, Graph, EFW
	Measure Real	Off,On
	Auto Average	Off,On
	Report Format	Basic, Basic+Anat, Adv., Adv.+Anat
	OB ADD'L Display	Off,On
	Weight Unit	g, lbs, g+lbs, g+GA
	Extrapolated	Off,On

MEASUREMENT PRESET

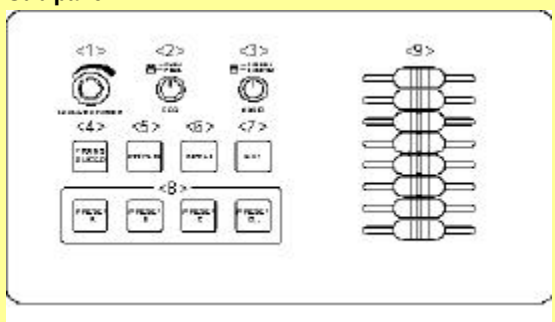
	Item	parameter
	OB Week Select	Off,Average,Current,U/S
	Trend Format	Single, Quad
	Trend Display	Current, Previous, Cur+Prev
	Trend Grid	Off,On
Report	Position	Item Up/Down

<Memo>

<Memo>

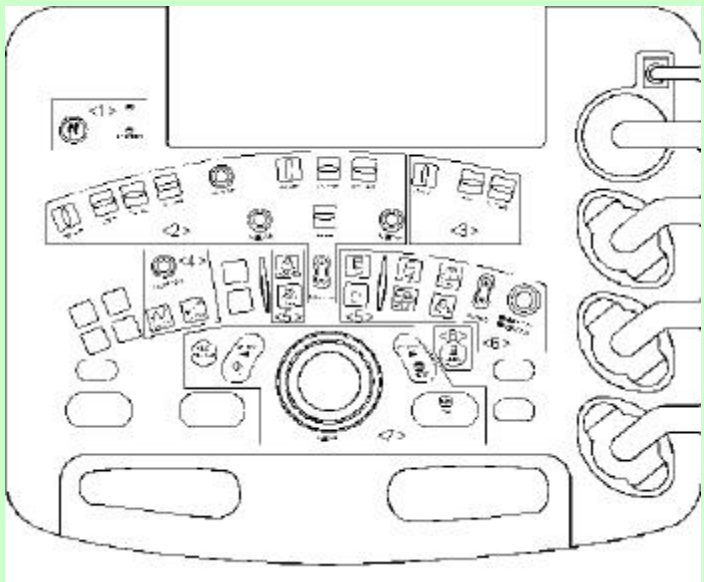
31. Panels

31.1 Sub panel



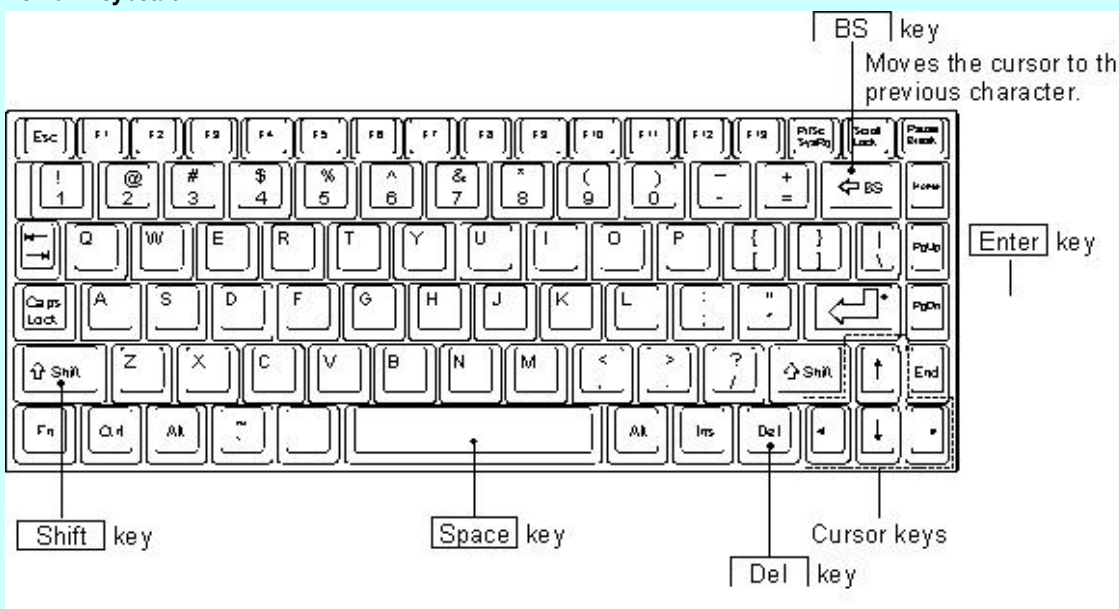
<1>	ACOUSTIC POWER	<8>	PRESET
<2>	ECG	<9>	STC
<3>	AUDIO		
<4>	TRANSDUCER		
<5>	PHYSIO		
<6>	APPLI		
<7>	EXT VIDEO		

31.2 Main Panel

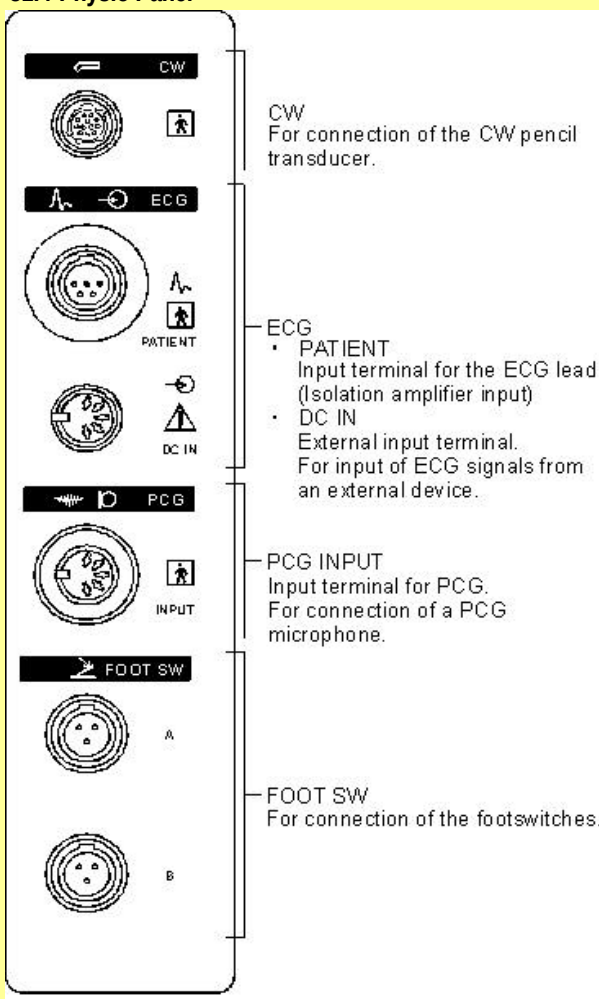


<1> NEW PATIENT switch/STANDBY LED
<2> CDI/PWD/CWD adjustment switches
<3> 2D adjustment switches
<4> Measurement switches and dials
<5> Display mode selection switches
<6> THI/FREQ switch and DEPTH/ZOOM
<7> Palm controller
<8> MENU switch

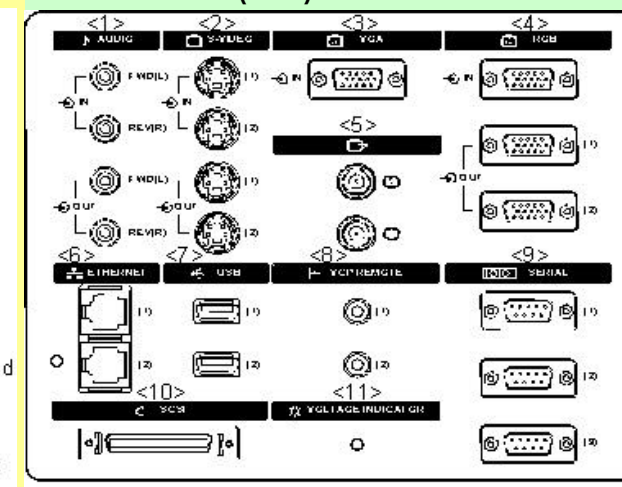
31.3 Full Keyboard



31.4 Physio Panel



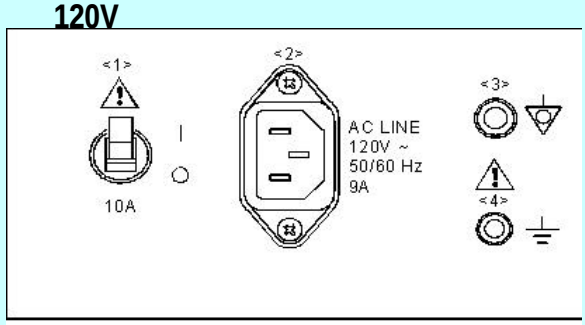
31.5 Rear Panel (RPNL)



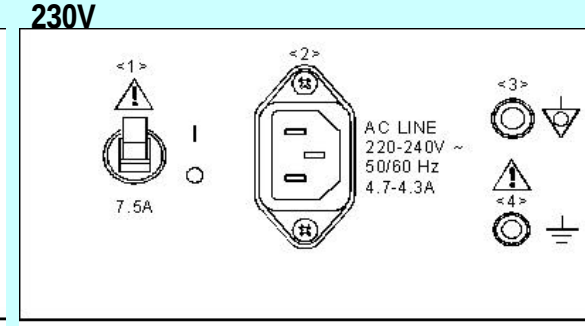
<1> AUDIO
<2> S-VIDEO (no VHS video)
<3> VGA
<4> RGB
<5> VIDEO OUT
<6> ETHERNET
<7> USB (not used : future use)
<8> VCP REMOTE
<9> SERIAL
<10> SCSI
<11> VOLTAGE INDICATOR

31.6 Power Panel

120V



230V



<1> Main switch
<2> Power cable connector
<3> Terminal to which the potential equalization conductor is to be connected
<4> Functional earth terminal

32. Manuals

Note Un-like other manuals order routine (order to Service Dept.), Order Nemio manuals to Nasu Parts Supply Section.
Please contact with the proper section for the update information.

OPERATION

YEM55400B-2
(FUNDAMENTALS)
[EUROPE]
YAM55400B-2
(FUNDAMENTALS)
[USA]
YEM55400C-2
(APPLICATIONS)
[EUROPE]
YAM55400C-2
(APPLICATIONS)
[USA]
YEM55400D-2
(ACOUS.POWER
DATA)
[EUROPE]
YAM55400D-2
(ACOUS.POWER
DATA)
[USA]

INSTALLATION

YEM55400E-1

SERVICE

YEM55400G-1
YEM55400H-1

PARTS LIST

YEM55400J-0

ELECT. DIAGRAM

YEM55400K-0

Other useful documents

Name	Document No.	Media	Remarks
ED-SEARCH	BSM31-3955	CD-ROM	Make order to SA-P (charge basis)
NEMIO CBT	BSM31-3921	CD-ROM	Make order to SA-P (charge basis)
SONO-BANK	BSM31-3525	CD-ROM	Make order to SA-P (charge basis)
SERVICE HAND BOOK	SD730-004ED	PAPER BOOK	Make order to Service Dept.
OPERATION NOTE (ENGLISH)	SB730-001ED	PAPER BOOK	Make order to Service Dept.

33. Kit composition

Only major parts and manuals. Installation check sheet is not mentioned.

KIT NAME	COMPOSITION		REMARKS
	Part Name	Part No	
UIDK-550A	ECDC3	BSM31-3885*A	
	ECDX3	BSM31-3887	
	RPNL2	BSM31-3888	
UIDK-551A	ECDX3	BSM31-3887	
UZMK-550A	ANNULAR STAND	BSM31-3218	
	SPECIFICATION	2A708-409 / -409E	YJ0554086A-0 / YE0554086A-0
	INSTALLATION	2C708-458E	YE0554086E-0
UIMC-550A	RTTC OP	BSM31-3274	including ; RTTC BSM31-3110
	SPECIFICATION	2A708-406 / -406E	YJ0554056A-0 / YE0554056A-0
	INSTALLATION	2C708-455E	YE0554056E-0
UIPC-550A	COLOR PSP OP	BSM31-3277	inc. RXBF A PWB BSM31-3099*A , RX64 PWB (A40-2),
	SPECIFICATION	2A708-370 / -370E	YJ0554052A-0 / YE0554052A-0
	INSTALLATION	2C708-419E	YE0554052E-0
UIPS-550A	3RD PORT PSEL	BSM31-3272	including PCAX PWB BSM31-3089
	SPECIFICATION	2A708-367 / -367E	YJ0554053A-0 / YE0554053A-0
	INSTALLATION	2C708-416E	YE0554053E-0
UIPS-551A	ANNU/TEE PSEL	BSM31-3271	including PCAA PWB BSM31-3090*A
	SPECIFICATION	2A708-366 / -366E	YJ0554054A-0 / YE0554054A-0
	INSTALLATION	2C708-366E	YE0554054E-0
UIME-550A	CMEM255 OP	BSM31-3279	including CMEM255 PWB BSM31-3204 (x3)
	SPECIFICATION	2A708-372 / -372E	YJ0554061A-0 / YE0554061A-0
	INSTALLATION	2C708-421E	YE0554061E-0
UIME-551A	CMEM255	BSM31-3204	
	SPECIFICATION	2A708-372 / -372E	YJ0554061A-0 / YE0554061A-0
	INSTALLATION	2C708-421E	YE0554061E-0
UIPW-550A	PW OP	BSM31-3283	including DPPR PWB BSM31-3107*A
	SPECIFICATION	2A708-374 / -374E	YJ0554063A-0 / YE0554063A-0
	INSTALLATION	2C708-423E	YE0554063E-0
UJUR-550B	REF UNIT/J,E	BSM31-3293	including EPCG BSM31-3087
	SPECIFICATION	2A708-373 / -373E	YJ0554062A-0 / YE0554062A-0
	INSTALLATION	2C708-422E	YE0554062E-0
UJUR-551B	REF UNIT/A	BSM31-3294	including EPCG BSM31-3087
	SPECIFICATION	2A708-373 / -373E	YJ0554062A-0 / YE0554062A-0
	INSTALLATION	2C708-422E	YE0554062E-0
UZFS002A	FOOT SWITCH	BSM30-6661	
UAEH001A	TEE HANGER	PM30-21547-1, -2	Gr.1 is for Japan, Gr.2 is for overseas
	INSTALLATION	2C707-019	
	INSTALLATION	2C707-019E	
	PARTS LIST	2F707-013E	

34. Troubleshoot and FAO

Black letters : Question / Trouble contents

Red Letters : Suspect or answer

Blue letters : (Reference documents / Remarks)

1 What is "iDoppler function" ? Explain the features.

iDoppler is "Intelligent Doppler".

Velocity range is automatically adjusted depends on the Doppler spectrum to prevent Aliasing.

Also, the velocity values are automatically measured and displayed at the right side.

(Nemio CBT)

---

2 What are the procedures to display Real Time Doppler trace ?

Set the settings of ; 1) Trace Peak, 2) Trace Mode and 3) Trace Mean on the pull-down menu or in the Exam preset menu.

(Operation 2B730-609E P.11-16)

(PW/CW menu explanations)

---

3 What are the procedures to register Custom pop-up menu ?

Select [Custom Popup] on the Exam Preset screen.

Select the menu items the customer frequently use.

(Operation 2B730-611E P.1-20)

---

4 What are the procedures to custermize the Post Process curves ?

In the 2D pull-down menu, select Modify PP.

Select EDIT.

Pop-Up menu will disappear, now with your Next Key select it until you move the Yellow box to the point you want to adjust, then adjust with trackball.

After you have made your adjustments highlight Set and press the Select Key.

The Modify Post Process confirmation screen will appear, make sure you want to set this curve prior to saying yes. Even if you say No the curve remains there until you have selected New Patient or Preset. This does give you a chance to see it in operation.

(Nemio CBT)

---

5 What are the procedures to display Hardware composition of the system ?

Preset D - Preset - Maintenance - Password "oimeN". You can find HW/SW menu.

in HW/SW screen, Hard ware configurations are automatically detected and shown when "HW" is marked at the right top.

(if SW is marked, you will be able to see the software configurations such as system software, optional software installed.)

(Nemio CBT)

---

6 After install SCSI color printer, Mitsubishi CP770DW, system sometimes hung-up.
What s the suspect cause ?
Take the following action ;
1. First remove the printer and make sure that this is caused by Printer installation.
2. System and DMU operation maybe un-stable due to improper SCSI settings especially for ;
SCSI terminator at the printer, SCSI cable length
(Service Information DSU60-467E*A)

7 SCSI devices have some general cautions. Mention the following.
What is SCSI terminate ?
--> Need active terminate at the last SCSI device on SCSI series connection.
What is SCSI ID ?
--> All SCSI devices (on the same SCSI series connection) must have different SCSI ID.
How long is the SCSI cable maximum length ?
--> 3 meters. (including all the SCSI wiring inside Nemio and DMU)
(SCSI device general idea)

8 SCSI printer is now successfully installed, but another problem ; you can only print out the Nemio images but not possible to print DMU images. What is the suspect cause ?
Check for "DMU Record Sel" setting in Special Configuration preset.
This must be set to DMU.
"Color Print" must be set on User Function key.
(Service Information DSU60-467E*A)

9 What is the recommended VCR model ?
SVO-9500MD [NTSC]
SVO-9500MDP [PAL]
(SSA-550A Systems Data)
(Note that Nemio has no VHS video I/O connectors, and only SVHS I/O are available.)
(This is the system specification and only recommend to use the above VCR which is SVHS type.)

10 With non-recommended VCR you installed, you get I/O ERR when you select VCR.
How you can eliminate this error ?
Set COM3 protocol to "Other". See the service information DSU60-486E for the details.
(Service Information DSU60-486E)

11 You bought MO disk for your Nemio support. But Nemio and Nemio DMU does not recognize that MO disk (MO disk label mention this is "not formatted"). What you can do ?
Basically recommended to buy MO disk with "Windows Formatted".
(Macintosh format is different from Nemio MO and DMU MO format type.)
If the system has DMU, exit to OS and select format (by right click) on the Explorer.
(Service Information DSU60-466E*A)

12 You found the way to format MO disk by the above.
But another problem. DMU MO drive can recognize that MO disk, but Nemio MO drive cannot recognize that MO disk. What is the suspect cause ? And what you can do ?
When you format that MO disk via the Explorer. There are 3 types of MO format types.
Nemio can accept FAT16. Maybe MO disk was formatted by FAT32 or by NTFS type.
Re-format that MO disk by FAT16 type.
(note that Nemio File Utility MO format is only for logical format. See DSU60-466E*A)
Hammer mark on Tool bar - Configuration Utility - Service - (password "pc-ws")
(Service Information DSU60-466E*A Also recommend you check for "MO" "FORMAT" searching by Internet.)
(So that you will be able to find many information about MO disk formats by different MO manufacturers.)

---

13 What the procedures to EXIT to OS (end the NEMIO DMU applications) ?
<Required facilities>
External Keyboard
External Mouse
<Operation procedures> could be not only one procedure. Mention all if any.
Remove rear cover to see DMU PC inside to access PC power switch afterwards.
Remove front cover by removing only one screw. (bottom of front cover is fixed by "magic tape" strongly.) Refer to service manual for those mechanical dis-assembly procedures.
At the system front side, you can find DMU PC rear side. So that remove standard Keyboard and Mouse connectors and connect External Keyboard and External Muse to the proper connectors on DMU PC rear. Select SERVICE menu in DMU and select EXIT to OS.
(Service Information DSU60-472E)

---

14 How you can save the DMU screen (by Bit map) into Floppy disk or MO disk ?
a) On DMU screen (before exit to OS), press [Alt] and [Print Screen] keys.
b) Exit to OS, select START - PROGRAM - ACCESSORY - PAINT to open paint.
c) Press [Ctrl] and [V] for paste. (or select paste from menu.) Insert MO disk into right MO disk
Note for MO format for DMU. If MO disk is nor readable by DMU, format MO disk by MO FORMAT in Configuration Utility menu.
d) Now the screen copy is pasted on Paint.
e) Select FILE - Save As.. , then select Removable Media (means MO Drive)
Save the original DMU screen into MO disk.
(Service Information DSU60-472E)

---

15 You replaced SYSC PWB BSM31-3112*A on your Nemio10 system.
After that you lost all the optional software. Why ?
And if you try to re-install optional software from Floppy Disk Drive, but the system does not recognize the Floppy Disk Drive. Also Why ?
SYSC PWB has all optional software installation information. As SYSC PWB stocked at parts section is for Nemio20 and 30. So that default setting of drive settings is MO drive. Change the setting by line command to activate MO drive.
(DSU60-473E for SYSC PWB notes)
(DSU60-474E for Line Command)
(check with SDS information.)

16 What upgrade kit required to connect cardiac sector probe on Nemio20 and Nemio10 ?
(no Doppler and Color Doppler required)
UIPC-550A
(Product Information MPIUS0212EA)

17 What are the probe models which is applicable for Dynamic Flow UIDF-550A
PVM-375AT and PLM-703AT (V2.0)
(PVM-375AT, PLM-703AT, PSM-37CT, PSM-20CT, PLM-1204AT, PSM-25AT : applicable on V3.0)

18 The customer wants to register his own OB measurement by referring his own trend curve tables. Mention the brief procedures.
1. Select OB measurement in the preset screen, 2. Select OB calculation,
3. Register the measurement item, 4. Open OB calculation select screen.
5. Select Table on Week, 6. Select Week Disp, 7. Now you can register new table.
(Refer to Operation manual 2B730-611E section 7.5.1 ~ 7.5.2)
(page after 7-21)

19 The customer wants to start his measurement from FL measurement on the "CALIPER" key in Hadlock method. Mention the brief procedures to register the measurement key.
1. Select OB (2D), and register FL by "Add". (check for Preset name you are now opening.)
2. Select Measure item select, then add OB. (again check for Preset name)
3. Select Auto Measurement, then for Measure1, select OB, and select FL.

20 The customer ask you to register the following. Mention the brief procedures.

" I want to add PHT into MR (Mitral Regurgitation) measurement" Mention the brief procedures.

1. Select Measure registration, Sample copy - MR, select MR, Modify, modify the names, etc.
2. Add and select PHT in item, Move the courser to blank space in Name and set, then input the label name. If no l a b e l is input, "No Label registered" will appear. (If no Name is input, also the message will appear.) 3
3. Exit from Measure registration menu and next select Measure Item in EXAM Preset.
4. Add MR in the Measurement item (check for the correct mode you are registering = D mode)

Refer to Operation manual 2B730-611E page 9-1 ~

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21 You could succeed the above user measurement for Doppler. But in that user Doppler measurement, you cannot use AUTO TRACE method. You can chose AUTO POINT ON for other Doppler measurements from the menu or from the velocity trace preset menu (in Measure preset but it does not work only for the user measurement you registered. What is the cause ?

You should set Auto point On/Off (Manual On/Off) in the Measure Registration screen for the user measurement. Open Measure Registration menu, Select the one you are using, Check the settings on "Measurement Preset" tag on that screen.

---

22 Which is correct ?

In RATIO measurement,

a) Ratio A = Vel1A / Vel2A <-- CORRECT

b) Ratio A = Vel1A / Vel1B <-- WRONG

Refer to Operation manual 2B730-611E page 5-15

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23 The customer does not like some kind of animations when the menu open.

It looks like the menu window always starting to open from the center of the screen.

What is the setting to change this animation when the menu open ?

Set "Window type" from Animation to Normal in the Special Configuration preset

---

24 The customer ask you set FREEZE mode when the system is turned on. What is the setting ?

Set "Power On" from Real to Freeze in the Special Exam preset (EXAM preset -> Shift + >)

---

25 What is the suspect cause (defective part or any other reasons) for this failure ?

Just imagine suspect cause based on each part function and based on your experiences.

<phenomenon> (all other functions are okay except the following)

Doppler auto trace line is displayed wrong.

<suspect cause>

DPPR PWB

Doppler auto trace line is generated by DPPR PWB.

26 What is the suspect cause (defective part or any other reasons) for this failure ?
Just imagine suspect cause based on each part function and based on your experiences.
<phenomenon> (all other functions are okay except the following)
Color palette is abnormal.
<suspect cause>
ECDC PWB, SYSC PWB
Color palette is handling by RGB converters on ECDC by RGB map which originally come from SYSC PWB.

27 What is the suspect cause (defective part or any other reasons) for this failure ?
Just imagine suspect cause based on each part function and based on your experiences.
<phenomenon> (all other functions are okay except the following)
Power supply is down. Voltage indicator LED rear is OFF.
<suspect cause>
If it seems that there is no power: no monitor image and no panel operation, and if the LED is LED is OFF, please first check if the Auxiliary outputs are there (230 V).
If these outputs are normal, most probably the SWRG is broken.
It these outputs are abnormal, the Line Filter or the Transformer might be broken.
Please measure the output of the Line Filter by dis-assembly this Line Filter.
(Nemio CBT "troubleshooting")

28 What is the suspect cause (defective part or any other reasons) for this failure ?
Just imagine suspect cause based on each part function and based on your experiences.
<phenomenon> (all other functions are okay except the following)
DMU print image has some ghost noise. Nemio print is okay. Nemio and DMU are both using the common color SCSI printer CP-770DW.
<suspect cause>
ECDC PWB

29 <phenomenon> (all other functions are okay except the following)
System is blocked (locked) quite often.
<How to check>
First check by minimum system.
<suspect cause>
Depends on minimum system check results, but usually SYSC PWB or SUBC PWB.

30 <phenomenon> (all other functions are okay except the following)
Error message "Calibration error" occurs.
<suspect cause>
BWPR PWB
You can find "Under Calibration" during boot-up sometimes. This message appears when the date is changed and first turn on that day. This calibration is a kind f B-mode image gain fine tuning done by BWPR PWB. Calibration error occurs if this is malfunctioning.
(Service manual error code list No. 184)

31 <phenomenon> (all other functions are okay except the following)
Error message "DMU shutdown error. System is turned off in 5 minutes" occurs.
<suspect cause>
DMU failure
(Service manual error code list No. 99)

32 <phenomenon> (all other functions are okay except the following)
In User measurement registration screen, "No label is registered" occurs.
<suspect cause>
Operation mistake. Have to input label name and click the blank area on the label input screen.
(Operation manual 2B730-611E P.9-6)

33 <phenomenon> (all other functions are okay except the following)
Error message "Flash save Err" occurs.
<suspect cause>
SYSC PWB (flash ROM is on SYSC PWB)
(Service manual error code list No. 55)

34 It is necessary to sell Nemio 30 as a Nemio 20. How to do that ?

Follow the installation procedures for UIUG-550A (manual No. YE0554058E-0 (2C708-417E)) in the opposite way.
However, one part will be required to cover the DMU MO drive space which will be blank after removing DMU unit from Nemio30.
Part Name : BLANK,COVER:MO
Part No. : 3H760128-0W

<Memo>

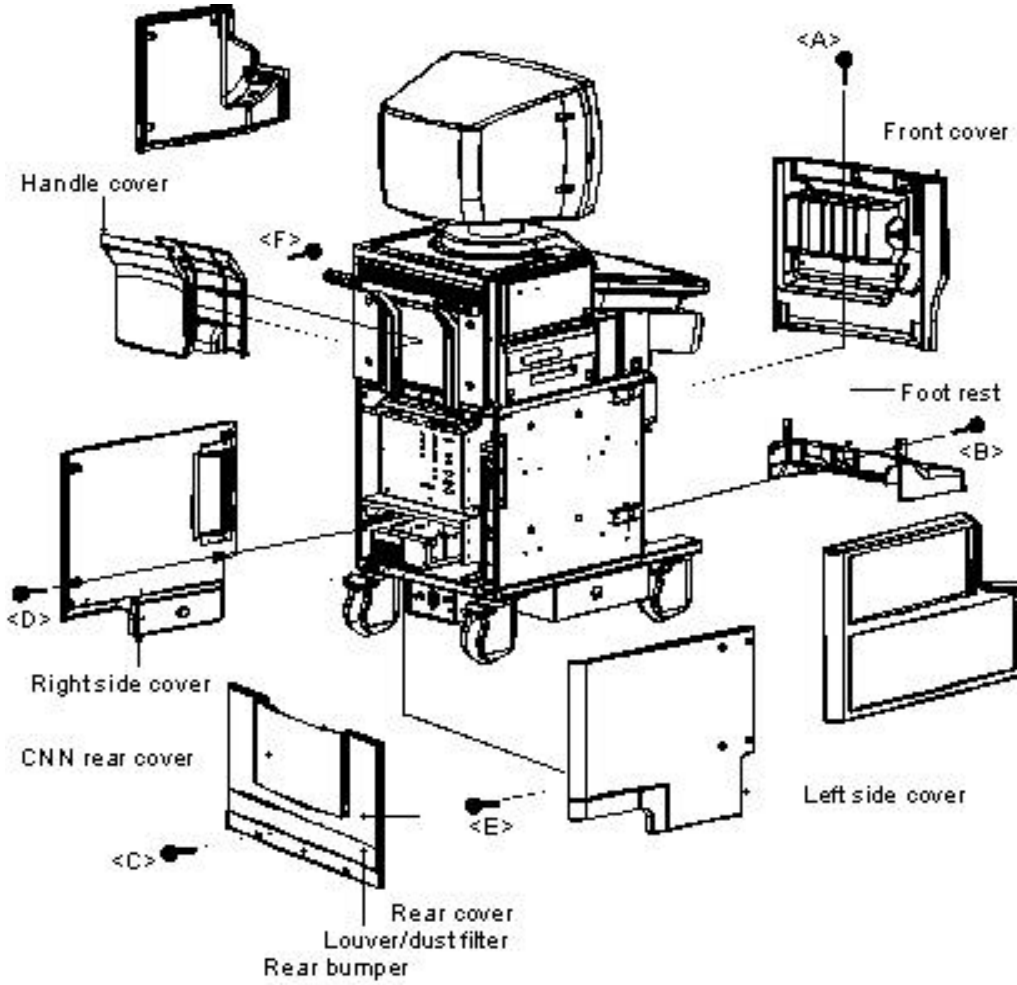
<Memo>

35. Mechanical work

For the detailed mechanical work, refer to service manual 2D730-150E.

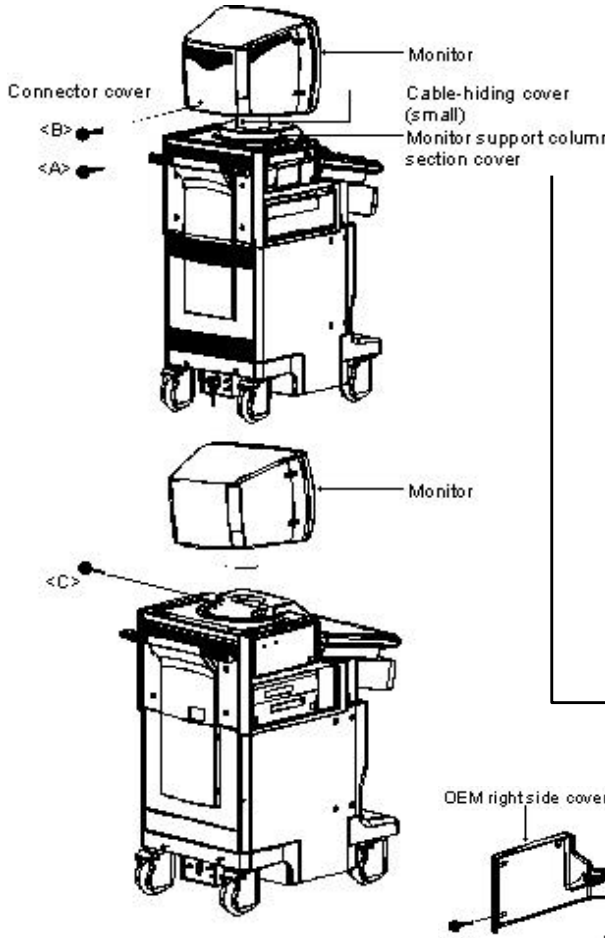
36.1 Removing the Covers

NOTE: Remove this cover by pulling it away from the front of the unit.
(The right and left corners at the bottom of this cover are secured with Velcro tape.)

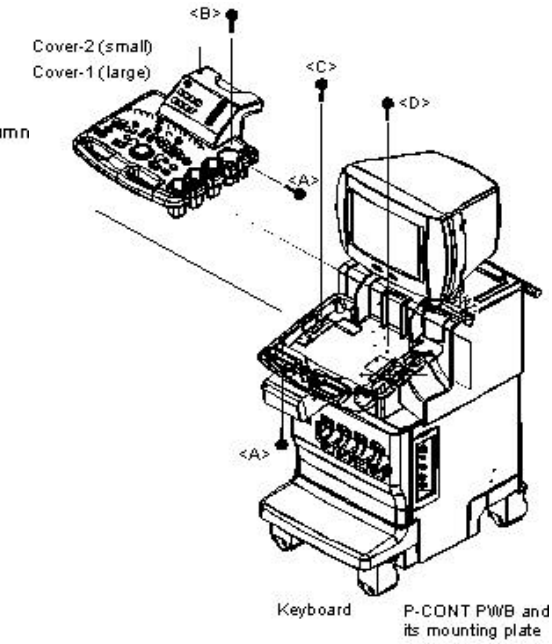


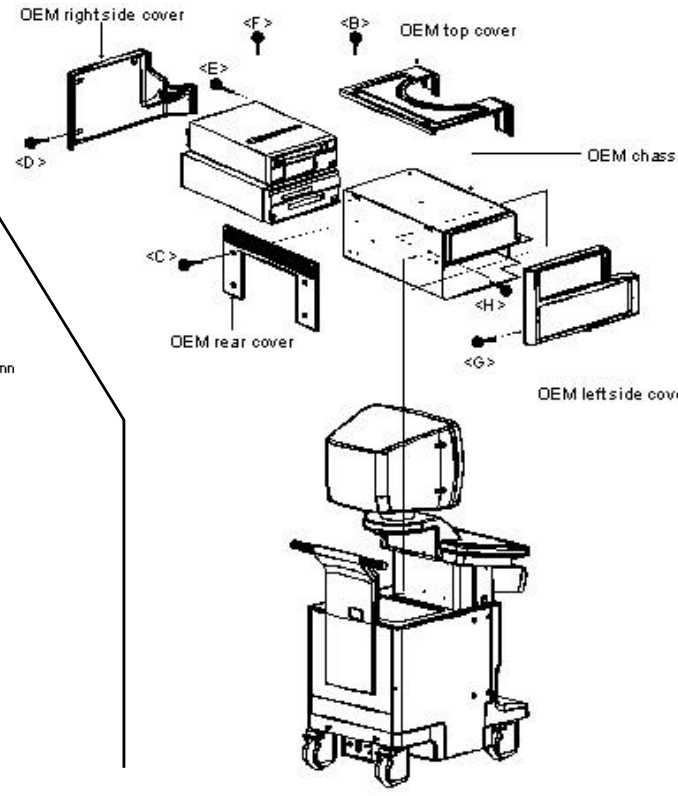
<Memo>

36.2 Removing the Monitor

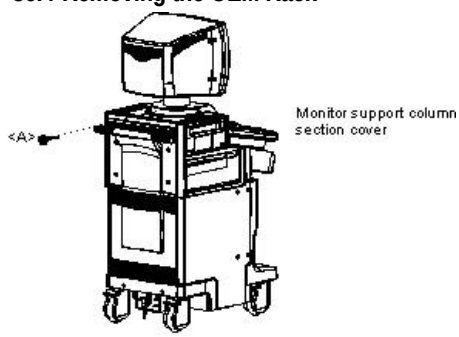


36.3 Removing the Operating Panel

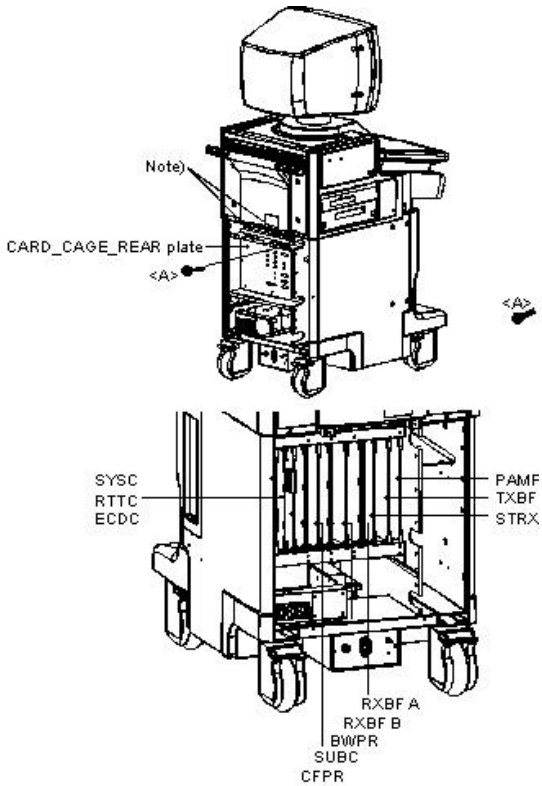




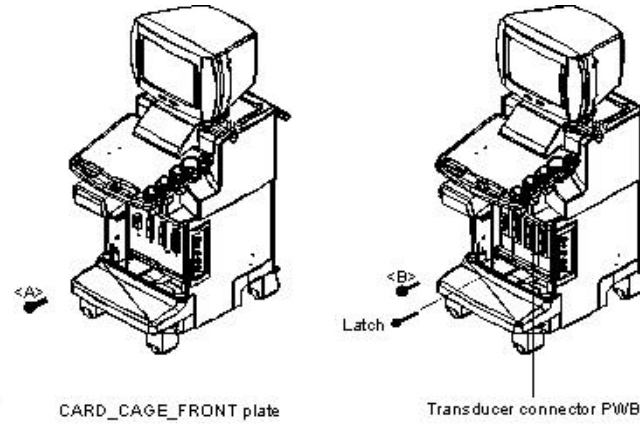
36.4 Removing the OEM Rack



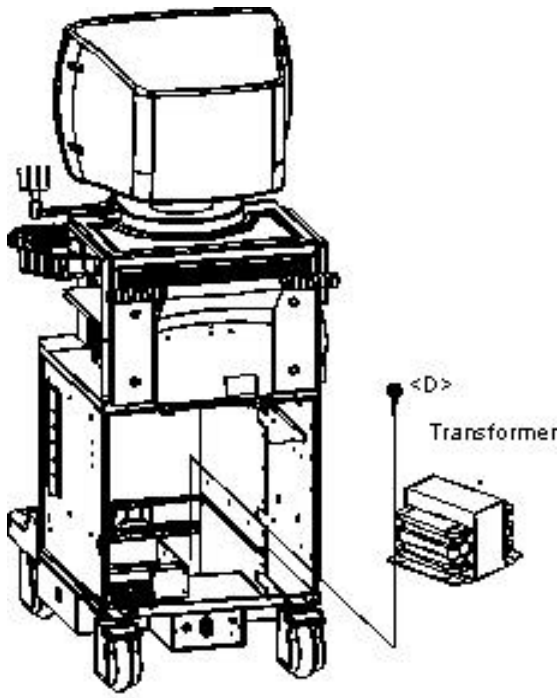
36.5 Removing the PWBs

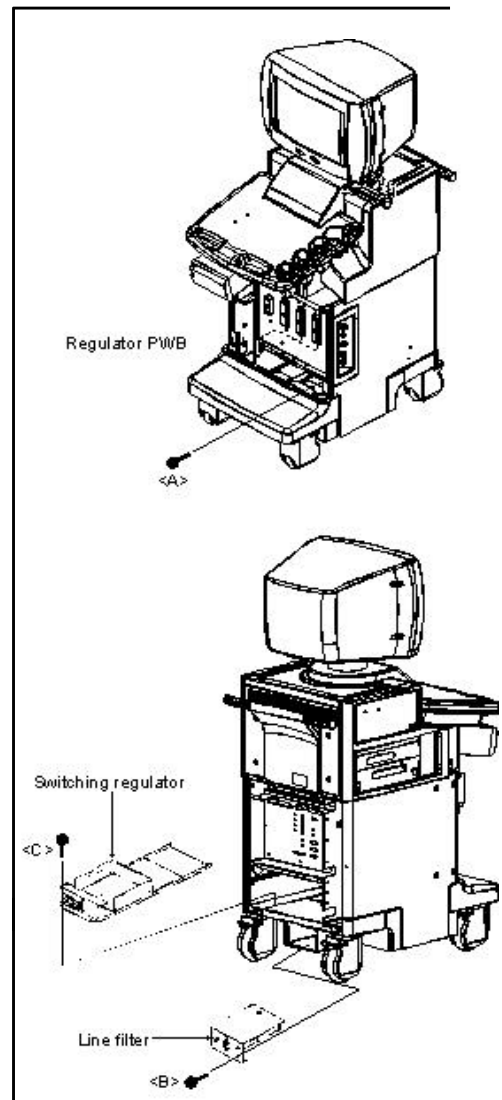


36.6 Removing the Transducer Connector

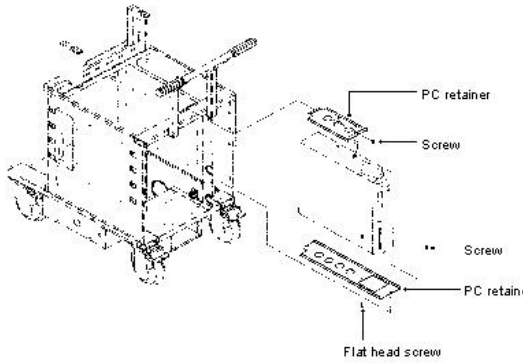


36.7 Removing the Units Related to the Power Supply

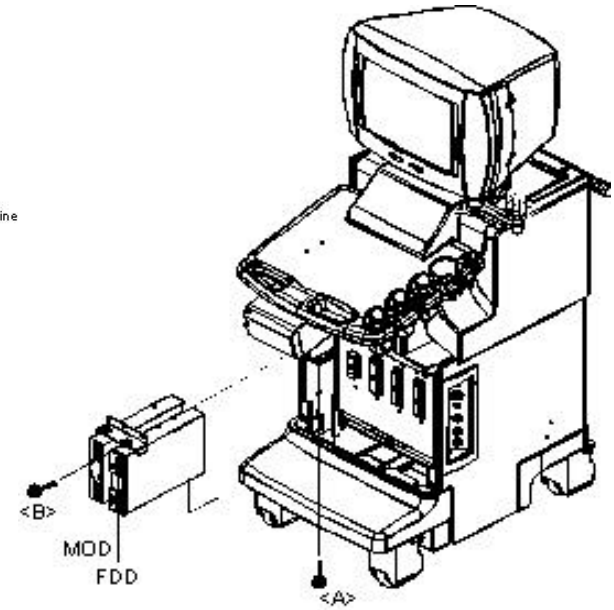




36.8 Removing the DMU (PC)



36.9 Removing the MOD and the FDD



<Memo>

36. Service parts

Please check for the details with Parts Manual 2F730-092E.
Contact with the proper section for the update information.
Check section 28 for HW/SW function available in Service function.
Check section 29 "SDS" for the board revisions.

Type	Reference	Part No.	Part Name
Cable	RS232C A Cable	BSM31-3193	DMU RS232C A CABLE
Cable	RS232C B Cable	BSM31-3194	DMU RS232C B CABLE
Cable	Trackball Cable	BSM31-3195	CB TB
Cable	SCSI Cable	BSM31-3196	DMU SCSI CABLE
Cable	Ether Cable	BSM31-3197	CB Ether
Cable	Power supply cable (manufacturer C14R13VW1	BSM31-3198	CB Power
Cable		BSM31-3751	PS2 CABLE
Cable	Capture card for Digital DMU	BSM31-3883	CAPTURE CARD DIGITAL
Cable	LVDS cable for Digital DMU	BSM31-3884	LVDS CABLE
Cable	CaBle Color MoniTor for Signal	BSM31-3113	CB-CMTS
Cable	CaBle Color MoniTor for Power	BSM31-3114	CB-CMTP
Cable	CaBle ConTrolPannel Signal	BSM31-3116	CB-CTPS
Cable	CaBle ConTrolPannel Power	BSM31-3117	CB-CTPP
Cable	CaBle FD Driver Signal	BSM31-3118	CB-FDDS
Cable	CaBle MO Driver Signal	BSM31-3120	CB-MODS
Cable	CaBle Ecg & PCG	BSM31-3127	CB-EPCG
Cable	AC PS cable(over sea)	BSM31-3128	CB-PMAN/A
Cable	AC PS cable(Europian)	BSM31-3129	CB-PMAN/E
Cable	AC PS cable (Japanese)	BSM31-3130	CB-PMAN/J
Cable		4H470323-0	S-VHS CABLE
Cable		4H470324-0	AUDIO CABLE
Cable		4H470564-0	SCSI EXTCABLE
Cable		4H470566-0	MOFD INT CABLE
Cable		BNC-CBL-1050	CABLE-ASSY
Cable		BSM30-5964*A	ECG CABLE/E TSB
Cable	Cable device power for FDD,MOD and fans	BSM31-3296	CB-DVPW
Cable	Cable power switch(incl. standby SW)	BSM31-3297	CB-PWSW
Cable	Cable mother between SWRG and MTHR	BSM31-3298	CB-MTHR
Cable	Cable slide keyboard	BSM31-3299	CB-SKBD
Cable		CS12-781-1	B/W REMCN
Cable		DB09M-25MCRS	D-SUB9/25PIN
Cable		HD15M-RGBM4	D-SUB BNC
Cable	Ground cable	PM30-05371*B	CABLE
CD-ROM	CD-ROM base service information	BSM31-3921	NEMIO CBT
CD-ROM	CD-ROM base service information	BSM31-3955	ED-SEARCH
DMU		BSM31-3187	Capture card
DMU		BSM31-3188	SCSI Card

DMU	RGB Cable	BSM31-3191	DMU RGB CABLE
DMU	VGA Cable	BSM31-3192	DMU VGA CABLE
DMU	Keyboard Mouse Emulator	BSM31-3199	KB EMU
DMU		BSM31-3189*A	DMU PC /J V1.1
DMU		BSM31-3189*B	DMU PC /J V1.2
DMU		BSM31-3189*C	DMU PC /J V1.5
DMU		BSM31-3190*A	DMU PC/E V1.1
DMU		BSM31-3190*B	DMU PC/E V1.2
DMU		BSM31-3190*C	DMU PC/E V1.5
FUSE		K5D632BK0002	FUSE
Mecha	CONTROL PANEL BASE	BSM31-3167	Handle,cover
Mecha	PROBE HOLDER	BSM31-3168	Array
Mecha	PROBE HOLDER	BSM31-3171	Gel
Mecha	MAIN FRAME	BSM31-3180	Caster ：Catis
Mecha	MAIN FRAME	BSM31-3181	Cover of caster（Cover-L/R）
Mecha	FRONT	BSM31-3172	Front cover
Mecha	FRONT	BSM31-3173	Foot rest
Mecha	LEFT and RIGHT SIDE	BSM31-3174	Left side cover
Mecha	LEFT and RIGHT SIDE	BSM31-3175	Right side cover
Mecha	REAR	BSM31-3176	Connector cover of rear
Mecha	REAR	BSM31-3177	Louver
Mecha	REAR	BSM31-3178	Rear bumper
Mecha	REAR	BSM31-3179	Dust filter
Mecha	Left side Option rack cover	BSM31-3182	L,S,O, RACK
Mecha	Right side Option rack cover	BSM31-3183	R,S,O, RACK
Mecha	Top cover for Option rack	BSM31-3184	T,C,F.OPTION RACK
Mecha	Rear cover for Option rack	BSM31-3185	R,C,F,OPTION RACK
Mecha		BSM31-1974-12	Audio Knob
Mecha		BSM31-1974-14	Encoder knob (Large)
Mecha		BSM31-1974-15	Encoder knob (Small)
Mecha	DMU assembling plate upper	3H590199-0WB	HOLDER:DELL,UPR
Mecha	DMU assembling plate bottom	3H590200-0WB	HOLDER:DELL,BTM
Mecha		2H580147-0WF	HLDR.B/W
Mecha		2H580148-2WF	COVER,TOP
Mecha		2H760044-0W	COVER:HNDL FRNT
Mecha		2H760045-0W	COVER:HNDL REAR
Mecha		3H580098-0WF	COVER:CABLE
Mecha		3H590210-0FB	MTG PLT:SVO9500
Mecha		3H5902111CBS	OEM BAY
Mecha	Japanese type (long arm)	3H600035-0W	CABLE-ARM
Mecha	Europe type (short arm)	3H600036-0W	CABLE-ARM
Mecha		3H600041-1W	ASSY:VCRHLD,FR
Mecha		3H600042-1W	ASSY:VCRHLD,RR
Mecha	Probe cable hook	3H760122-0G	HOOK
Mecha		4H580034-0BF	CVR:HANDLE
Mecha		4H630795-0Y	BLANK LBL:BLUE

Mecha		4H690043-0WB	WASHER:FHS
Mecha		4H760160-0L	CAP
Mecha		4H760161-0L	CAP,WASHER
Mecha	FAN MO	BSM31-3155	FANM
Mecha	Reference Panel w/CW,ECG,PCG,FSW	BSM31-3203	RHCP
Mecha		BSM31-3627	Key Tops SET
Mecha	Nemio 10 panel cover with "Nemio10" label	BSM31-3164-01	PANEL COVER
Mecha	Nemio 20 panel cover with "Nemio20" label	BSM31-3164-02	PANEL COVER
Mecha	Nemio 30 panel cover with "Nemio30" label	BSM31-3164-03	PANEL COVER
Mecha		2H7600420BS	REAR COVER
Mecha	Blank cover for MO drive space	3H760128-0W	BLANK,COVER:MO
PAINT		AZP001-13	PAINT, GRACE WHITE
PAINT		BSM31-3614	PAINT, CLOUDY BLUE
PWB	ECG & PCG	BSM31-3087	PWB,EPCG
PWB	Probe Connector for Array Standard	BSM31-3088	PWB,PCAS
PWB	Probe Connector for Array eXtend	BSM31-3089	PWB,PCAX
PWB	Probe Connector for Annular array	BSM31-3090	PWB,PCAA
PWB	Probe SELector	BSM31-3092	PWB,PSEL
PWB	Probe CoNTroller	BSM31-3093	PWB,PCNT
PWB	Battery PacK	BSM31-3083	PWB,BPK
PWB	Pre-Amplifier (inc. A40-1 CWRX)	BSM31-3094	PWB,PAMP(CW)
PWB	Pre-Amplifier (inc. A40-2 RX64)	BSM31-3095	PWB,PAMP(64)
PWB	Pre-Amplifier (inc. A40-3 RX32)	BSM31-3096	PWB,PAMP(32)
PWB	TX Beam Former	BSM31-3097*A	PWB,TXBF
PWB	Scw & cw Tx RX	BSM31-3098	PWB,STRX
PWB	RX Beam Former	BSM31-3099*A	PWB,RXBF A
PWB	RX Beam Former	BSM31-3100*A	PWB,RXBF B
PWB	SUB Controller	BSM31-3104*A	PWB,SUBC
PWB	Color Flow Processor (inc. A51 CMEM63)	BSM31-3105	PWB,CFPR
PWB	Color Flow Processor (inc. A51 CMEM255)	BSM31-3106	PWB,CFPR
PWB	DoPpler PRocessor	BSM31-3107*A	PWB,DPPR
PWB	video EnCoder DeCoder for BW	BSM31-3108*C	PWB,ECDC
PWB	video EnCoder DeCoder for Color	BSM31-3109*C	PWB,ECDC
PWB	Rear PaNeL (inc. A69-1 RPSC, A69-2 RPTM)	BSM31-3111	PWB,RPNL
PWB	SYStem Controller (inc. A70-1 SYFX)	BSM31-3112*A	PWB,SYSC
PWB	(+CINE63) Line doubler	BSM31-3706	PWB,BWPR
PWB	(+CINE255) Line doubler	BSM31-3707	PWB,BWPR
PWB	INCLUDING QSP,Cine 255	BSM31-3708	PWB,CFPR,QSP
PWB	ECDC3 (color with ECDX2)	BSM31-3885	ECDC3
PWB	Annex for Digital IF	BSM31-3887	ECDX3
PWB		BSM31-3888	RPNL2
PWB	B&W Processor (inc. A48-2 BWSC, A51 CMEM	BSM31-3101*A	PWB,BWPR
PWB	B&W Processor (inc. A48-2 BWSC, A51 CMEM	BSM31-3102*A	PWB,BWPR
PWB	B&W Processor anneX	BSM31-3103	PWB,BWPX
PWB	RoTaTion Controller for annular	BSM31-3110	PWB,RTTC
PWB		55400AEXT4	PWB,EXTENDER-4

PWB		55400AEXT5	PWB,EXTENDER-5
PWB	Service tool to display image on color monitor w	55400ARPJG	RPNL JIG
PWB	PCMS for IDUS	BSM31-3091	PWB, PCMS
PWB	PCTV for TV	BSM31-3981	PWB, PCTV
Soft		BSM31-3798	MO CORD RED
Soft kit	UDPA-550A	BSM31-3231-01	MO DMU PANORAMIC
Soft kit	UDFE-550A	BSM31-3232-01	MO DMU FETAL FACE
Soft kit	UDTI-550A	BSM31-3245-01	MO DMU TIC
Soft kit	UDAT-550A	BSM31-3247-01	MO DMU ACT
Soft kit	UDTD-550A	BSM31-3248-01	MO DMU TDI
Soft kit	UDAM-550A	BSM31-3249-01	MO DMU ACM
Soft kit	UDSE-550A	BSM31-3250-01	MO DMU STRESS
Soft kit	UDFR-550A	BSM31-3251-01	MO DMU 3D DICOMIT
Soft kit	UDFR-551A	BSM31-3252-01	MO DMU FUSION 3D
Soft kit	UDDS-550A	BSM31-3253-01	MO DMU DICOM
Soft kit	UDTM-550A	BSM31-3254-01	MO DMU LIVE VIEW
Soft kit	UDSR-550A	BSM31-3255-01	MO DMU REPORT
Soft kit	USTH-550A	BSM31-3210-01	THI KEY MO
Soft kit	USTH-551A (for Nemio 10)	BSM31-3211-01	THI KEY FD
Soft kit		BSM31-3212-01	CHI,FEI KEY MO
Soft kit	USDA-550A	BSM31-3213-01	DCA KEY MO
Soft kit	USTD-550A	BSM31-3214-01	TDI KEY MO
Soft kit	USHP-550A	BSM31-3215-01	HPRF KEY MO
Soft kit	USHI-551A (for Nemio 10)	BSM31-3789-01	CHI,FEI KEY MO
Soft kit	USDF-550A	BSM31-3792-01	Dynamic Flow KEY MO
Soft kit	USTI-550A	BSM31-3216-01	TIC KEY MO
Soft kit	USAC-550A	BSM31-3217-01	ACM KEY MO
unit	COLOR MONITOR	BSM31-3157	Front panel
unit	COLOR MONITOR	BSM31-3158	Rear cover
unit	COLOR MONITOR	BSM31-3159	Connector cover
unit	COLOR MONITOR	BSM31-3160	Cable cover
unit	BW MONITOR	BSM31-3161	Front panel
unit	BW MONITOR	BSM31-3162	Rear cover
unit	BW MONITOR	BSM31-3163	Connector cover
unit	CONTROL PANEL	BSM31-3164	Cover-1(Big)
unit	CONTROL PANEL	BSM31-3165	Cover-2(Small)
unit	CONTROL PANEL	BSM31-3166	Slide volume
unit	Regulator	BSM31-3062*A	PWB,RGLT
unit	Switching Regulator (inc, A04 OUTL)	BSM31-3063*A	SWRG
unit	LiNe Filter/American （inc. A08 RCLM)	BSM31-3064	LNF/A
unit	LiNe Filter/European （inc. A08 RCLM)	BSM31-3065	LNF/E
unit	LiNe Filter/Japanese （inc. A08 RCLM)	BSM31-3066	LNF/J
unit	PoWer Transformer/European	BSM31-3068	PWX/E
unit	Control Panel Controller	BSM31-3070*A	PWB,CPCT
unit	MAiN Panel	BSM31-3071	PWB,MANP
unit	SUB Panel	BSM31-3072	SUBP

unit	PALM switch	BSM31-3075	PALM
unit	KeyBoarD Light	BSM31-3076	PWB,KBDL
unit	Slide KeyBoarD	BSM31-3078	PWB,SKBD
unit	B/w MONitor	BSM31-3079	BMON
unit	Color MONitor	BSM31-3080	CMON
unit	FAN Front-side	BSM31-3081	FANF
unit	MoTHeR	BSM31-3084	PWB,MTHR
unit	FD DriVer	BSM31-3085	FDDV
unit	MO DriVer	BSM31-3086	MODV
unit	FAN Backside	BSM31-3082	FANB
unit	High Voltage Power Supply with cable	BSM31-3069*A	PWB,HVPS
unit		BSM31-1974-18	Full key
unit	Reference panel w/ FSW	BSM31-3295	FSCP

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37. SYSC PWB / Ser. No. / Option Soft

If SYSC PWB will be replaced by troubleshooting, the system serial number will be changed once. This is because the system serial number is registered on SYSC PWB, and no one knows what serial number registered on SYSC PWB from service parts stock.

Please note for the following when SYSC PWB will be replaced.

37.1 Remove optional software.

Please remove the optional software.

If it is no longer possible to remove the optional software because of SYSC PWB failure, it will be no problem to re-install those optional software afterwards ; see below.

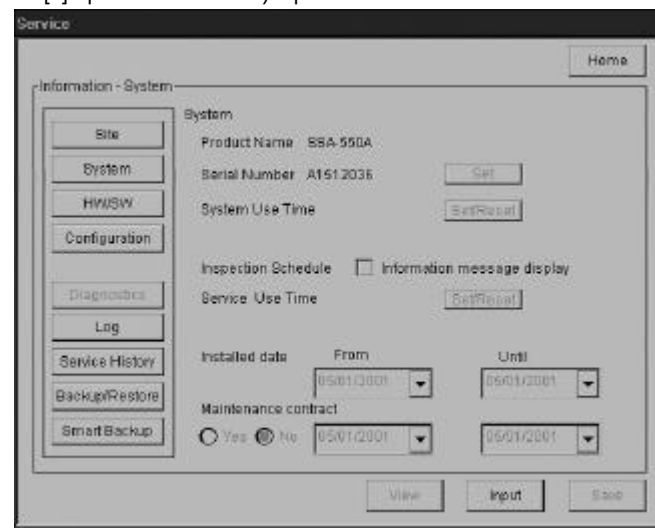
1 Re-input the correct system serial number from Service menu - Information - System.

(Preset D.. - Preset - Maintenance - [SHIFT] and [<] - password "oimeN") Input the serial number

-1 Enter the Service screen

-2 Select [Information] a [System].

-3 Press [Input] and press [Set]. Input the serial number (8-digit No.) and press [Save].



2 After setting the correct system serial numbers, re-install option software by the

Note As far as the system serial number becomes the same on this replacement SYSC PWB, you may use original optional software key MO disks which were installed on this system before and not yet un-installed. This is because MO disks remember the system serial number which was installed before, and it is possible to install again if the serial number is the same as last installation.

37.2 Installing the Optional software (THI, TDI, etc.)

-1 Remove the write protection of optional disks. Enter the Service menu.

-2 Insert the optional disk in the MOD or FDD.

-3 Press [Home] and enter Service screen.

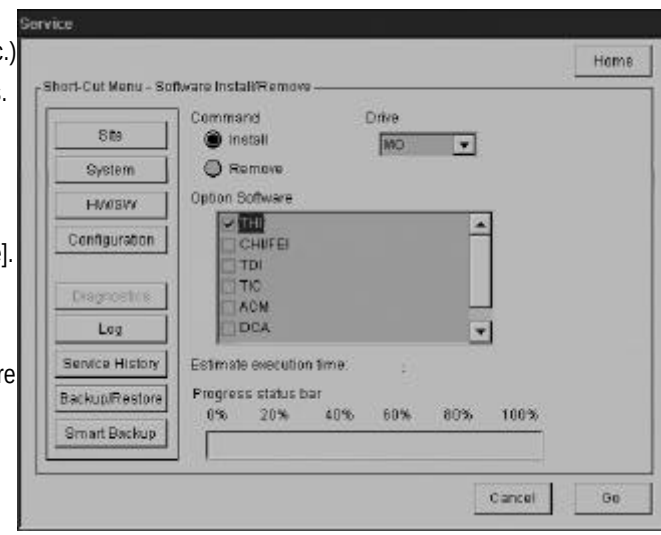
-4 [Short-cut Menu] a [Software Install/Remove].

-5 Select the radio button "Install" in Command.

-6 Select "MO" or "FD" from Drive menu.

-7 Place a check in check box in Option Software

-8 Click [Go]. (Do not double click. Double click may cause the error.)



Installation is completed when "Done!" is displayed to the right of the Progress status bar.

-9 Remove the optional system disk from the MO or FD drive and write-protect it.

-10 Perform these steps for each optional software.

38. Image Data Format

38.1 Nemio Cine capture

Preset settings related with Image Data saving and Data format

		Preset Name	Selection
1	On Nemio, still image can be saved into MOD or FDD FDD or MOD can be set in Special Configuration preset menu. The choice of FDD was added on & after V2.1. See the APPENDIX Product Information MPIUS0220EAA	Disk Select	FDD,MOD
2	Image format can be set in the Configuration preset menu. BMP (BitMap) has system condition code on & afer V2.0 See the APPENDIX Product Information MPIUS0215EA	Image File Format	BMP,Jpeg,BMC
3	JPEG compression ratio can be set in Configuration preset menu. (compression L = 1/5, M=1/10, H=1/20)	Compression Quality	L, M, H

<Memo>

39. Error code list

Error message	Classification	Function	Description
*1: Txview Error 0x *2 (PID = *3)	Error log	Test program	Error in checking the path from the TXBF and PAMP to the RXBF (*1: Name of the board that has invoked the processing, *2: Channel in which the error has occurred, *3: ID of the transducer used in the test)
[MainFrame] Unexpected Msg has been received. wParam:XXXXXXXX lParam:XXXXXXXX	AfxMessage Box	Report function	An illegal measurement title ID has been specified. For debugging
a Program error has occurred.	Dialog	Report function	Illegal designation for saving found.
ABRT COM	Status indicator at the bottom left of the screen	DMU	Communication NAK retry error. (This message is displayed only when preset.) This message is displayed for the alpha protocol only.
Access Error	Dialog	Measurement Registration	The system failed to access the MOD or FDD in the Upload or Save operation.
Active view Change Error	Dialog	Patient ID registration	Failure in acquiring the active frame window.
Active view Change Error	AfxMessage Box	Report function	Failure in acquiring the active frame window. For debugging
All files will be deleted. Are you sure?	Dialog	Measurement Registration	Confirmation message to be displayed when "All Clear" is selected in the Measurement Registration initial screen
an Access (Caliper Data) error has occurred.	Dialog	Report function	Failure in saving the data.
an Access (Patient ID) error has occurred.	Dialog	Report function	Failure in data acquisition.
an Access error has occurred.	Dialog	Report function	Access error message
an Access error has occurred. << ArcFileName >> GetLastError()==ErrorCode	Dialog	Patient ID registration	Failure in opening an archived file. For debugging ArcFileName: Archived file name ErrorCode: Error code
an Access error has occurred. CPatDataCtrl::PatClose CloseHandle()==0 GetLastError()==ErrorCode	Dialog	Patient ID registration	Failure in closing the shared memory. For debugging ErrorCode: Error code
an Access error has occurred. CPatDataCtrl::PatClose UnmapViewOfFile()==0 GetLastError()==ErrorCode	Dialog	Patient ID registration	Failure in unmapping the shared memory. For debugging ErrorCode: Error code
an Access error has occurred. CPatDataCtrl::PatOpen CreateFileMapping()== hMFileMap, GetLastError()==ErrorCode	Dialog	Patient ID registration	Failure in opening the shared memory. For debugging hMFileMap: Handle of the file mapping object ErrorCode: Error code
an Access error has occurred. CPatDataCtrl::PatOpen MapViewOfFile()==NULL GetLastError()==ErrorCode	Dialog	Patient ID registration	Failure in mapping the shared memory. For debugging ErrorCode: Error code
an Access error has occurred. CPatDataIf::Delete CommentFileCtrl2.Delete()== Ret GetLastError()==ErrorCode	Dialog	Patient ID registration	Failure in deleting the Comment 2 data file. For debugging Ret: Returned value ErrorCode: Error code
an Access error has occurred. CPatDataIf::Delete LmpFileCtrl.Delete()==Ret GetLastError()==ErrorCode	Dialog	Patient ID registration	Failure in deleting the LMP data file. For debugging Ret: Returned value ErrorCode: Error code
an Access error has occurred. CPatDataIf::Delete PatientFileCtrl.Delete()==Ret GetLastError()==ErrorCode	Dialog	Patient ID registration	Failure in deleting the patient data file. For debugging Ret: Returned value ErrorCode: Error code
an Access error has occurred. CPatDataIf::FastSequentialRead2 PatientFileCtrl.FastSequential Read()==Ret GetLastError()==ErrorCode	Dialog	Patient ID registration	Failure in fast sequential reading of the patient data file. For debugging Ret: Returned value ErrorCode: Error code

Error message	Classification	Function	Description
an Access error has occurred. CPatDataIf::Write CommonFileCtrl2.Write()==Ret GetLastError()==ErrorCode	Dialog	Patient ID registration	Failure in outputting the Comment 2 data file. For debugging Ret: Returned value ErrorCode: Error code
an Access error has occurred. CPatDataIf::Write LmpFileCtrl.Write()==Ret GetLastError()==ErrorCode	Dialog	Patient ID registration	Failure in outputting the LMP data file. For debugging Ret: Returned value ErrorCode: Error code
an Access error has occurred. CPatDataIf::Write PatientFileCtrl.Write()==Ret GetLastError()==ErrorCode	Dialog	Patient ID registration	Failure in outputting the patient data file. For debugging Ret: Returned value ErrorCode: Error code
an Access error has occurred. CPatDataIf::WriteEDD LmpFileCtrl.Write()==Ret GetLastError()==ErrorCode	Dialog	Patient ID registration	Failure in outputting the LMP data file (when saving the EDD data). For debugging Ret: Returned value ErrorCode: Error code
an Access error has occurred. CPatListCtrl::CurentSave_ GetInternalId PatDataIf.Write() == Ret GetLastError()==ErrorCode	Dialog	Patient ID registration	Failure in writing to the patient data file. For debugging Ret: Returned value ErrorCode: Error code
an Access error has occurred. CPatListCtrl::CurentSave_ GetInternalId PatDataIf.WriteEDD() == Ret GetLastError()==ErrorCode	Dialog	Patient ID registration	Failure in writing to the patient data file. For debugging Ret: Returned value ErrorCode: Error code
an Access error has occurred. pViewClass->IsDerivedFrom (RUNTIME_CLASS(CView))==	Dialog	Patient ID registration	Failure in view switching. (A view matching the basic class is not found.) For debugging
BWPR: BWPR (BWPR to ECDC)	Error log	Test program	Error in checking the path from the BWPR to ECDC
BWPR: Calibration Error 0xXXXX (HEX representation of CALIB_ERRORL value)	Error log	Test program	Calibration error in the BWPR
BWPR: CFPR (CFPR to ECDC)	Error log	Test program	Error in checking the path from the CFPR to ECDC
BWPR: CMEM(B)255 Read/Write Error	Error log	Test program	Read/write error in the CMEM(B)255
BWPR: CMEM(B)63 Read/Write Error	Error log	Test program	Read/write error in the CMEM(B)63
BWPR: CMEM(M) Read/Write Error	Error log	Test program	Read/write error in the CMEM on the BWPR
BWPR: ECDC Error (BWPR & CFPR to ECDC)	Error log	Test program	Error in checking the path from the BWPR and CFPR to the ECDC
BWPR: ECDC or BWPR Error	Error log	Test program	Error in checking the path from the BWPR and CFPR to the ECDC
Calibration Error	Dialog	Calibration	This message indicates that an error has occurred in the calibration that is performed once a day when the power supply is started.
Cannot create common resources.	Dialog	Patient ID registration	Failure in opening the shared memories at one time.
Caution: Loading the Patient File will overwrite with the same file name.	Dialog	File Utility	Message warning against overwriting of the patient ID data (database file) that is displayed when an attempt is made to load a patient ID data file.
Caution: Saving the Patient File will overwrite with the same file name.	Dialog	File Utility	Message warning against overwriting that is displayed when an attempt is made to save a patient ID database file in a directory in which the same file name already exists.

Error message	Classification	Function	Description
CFPR: CMEM(V)255 Read/Write Error	Error log	Test program	Read/write error in the CMEM(V)255
CFPR: CMEM(V)63 Read/Write Error	Error log	Test program	Read/write error in the CMEM(V)63
CFPR: ECDC Error (BWPR & CFPR to ECDC)	Error log	Test program	Error in checking the path from the BWPR and CFPR to the ECDC
CFPR: ECDC or BWPR Error	Error log	Test program	Error in checking the path from the BWPR and CFPR to the ECDC
CFPR: LUT RAM U4 Error	Error log	Test program	Error in the lookup table RAM on the CFPR
CFPR: Noise Cut FPGA RAM Error	Error log	Test program	Error in the noise cut FPGA RAM on the CFPR
CFPR: Noise Cut FPGA U38 Error	Error log	Test program	Error in the noise cut FPGA on the CFPR
CFPR: SDRC U14, U19 Error	Error log	Test program	Error in the SDRC on the CFPR
Change View Error	Dialog	Patient ID registration	Failure in view switching. (There is no active view.)
CMainFrame::SwitchViewMode invailed wViewMode	Dialog	Patient ID registration	The system has failed in view switching. (The value for wViewMode is invalid.)
Confirm ROI	Status display at the bottom left of the screen	Measurement	An invalid operation is performed during the measurement. Case 1: An ROI is set on a non-active image and the [Start] switch is selected in the TIC measurement. Þ TIC
CPatDataCtrl::%CPatDataCtrl PatDataCtrl Not Closed!	Dialog	Patient ID registration	The shared memory is not closed.
CPatDataCtrl::?????? PatDataCtrl Not Opened!	Dialog	Patient ID registration	Failure in opening the shared memory.
CPatDataCtrl::PatOpen OPatDataCtrl Opened!	Dialog	Patient ID registration	The shared memory is already open.
CPatDataIf::Write uwInternalId ==0 Why!?	Dialog	Patient ID registration	No internal ID is found.
CPatientView::FileSave_IDView PatDataIf.Write()==Ret	Dialog	Patient ID registration	Failure in writing to the patient data file. Ret: Returned value
CPatientView::FileSave_IDView thePatListCtrl.PatIdSearch ==FALSE	Dialog	Patient ID registration	Failure in searching the input ID.

Error message	Classification	Function	Description
Disk Error No Space on Disk Delete data from disk or insert a new disk to store data	Dialog	File Utility	The disk does not contain sufficient free space.
Disk Format Failed	Dialog	File Utility	Disk formatting could not be performed by the system.
DMU shutdown error. System is turned off in 5 minutes.	Caution screen	DMU	When the DMU is connected, the shutdown notification sent to the DMU has resulted in an response error. The system will turn OFF automatically 5 minutes after this message is displayed.
Door Open	Dialog	SCSI Printer	The printer door is open.
DPPR: CMEM(D) Read/Write Error	Error log	Test program	Read/write error in the CMEM(D) on the DPPR
DPPR: DSP Program Hang Up	Error log	Test program	The DSP on the DPPR is not working.
DPPR: DSP Program Init Error	Error log	Test program	The DSP program on the DPPR cannot be initialized.
DPPR: DSP Program Loading Error	Error log	Test program	The DSP program on the DPPR cannot be loaded.
ECDC: BWPR (BWPR to ECDC)	Error log	Test program	Error in checking the path from the BWPR to ECDC
ECDC: CFPR (CFPR to ECDC)	Error log	Test program	Error in checking the path from the CFPR to ECDC
ECDC: ECDC Error (BWPR & CFPR to ECDC)	Error log	Test program	Error in checking the path from the BWPR and CFPR to the ECDC
ECDC: ECDC or BWPR Error	Error log	Test program	Error in checking the path from the BWPR and CFPR to the ECDC
ECDC: SDRAM Read/Write Error	Error log	Test program	Read/write error in the SDRAM on the ECDC
Error!!	Switch list	Measurement Registration	If an error is detected in a registered file in the validity check during reading of all files (for example, at the time of list updating), this message is displayed in the "Name" field for the corresponding switch in the Measurement Registration initial screen (switch list).
Error: (the cause of the error is displayed)	Dialog	Measurement Registration	File open error or write error during editing of the registration information management file. (This should not occur in normal operation. Only the message is displayed.)
Error: (the cause of the error, file name (with path), and line number of the error in the file are displayed)	Dialog	Measurement Registration	An error is detected in the file validity check after "Add" or "Modify" processing or when "Upload" is executed.
Error: Manage File (Read) All files will be deleted.	Dialog	Measurement Registration	An abnormality is detected while reading the registration information management file. (This should not occur in normal operation. Only the message is displayed. All of the files are deleted because the subsequent operation cannot be ensured.)
File update?	Dialog	Measurement Registration	Confirmation message to be displayed when a file is registered to an existing switch in the Sample Copy or Update operation.
File will be deleted. Are you sure?	Dialog	Measurement Registration	Confirmation message to be displayed when "Delete" is selected in the Measurement Registration initial screen
Flash File Err ErrCode==Ret	Dialog	Patient ID registration	Failure in decompressing an archived file. Ret: Returned value
Flash Flash Save Err ErrCode==Ret	Dialog	Patient ID registration	Failure in writing to flash memory. Ret: Returned value

Error message	Classification	Function	Description
id full	Dialog	Report function	No more patient data can be added (maximum 300).
Image must be frozen to Store.	Dialog	File Utility	Message that is displayed when an attempt is made to save an unfrozen ultrasound image.
Invalid Parameter	Dialog	SCSI Printer	Invalid parameter.
Item will be deleted. Are you sure?	Dialog	Measurement Registration	Confirmation message to be displayed when "Delete" is selected in the Measurement Registration screen (Measurement Item or Calculation Item tab)
Lower Voltage Error!	Error log	Test program	The voltage is below the specified lower limit.
LV Type?	Dialog	Measurement Registration	Confirmation message to be displayed when "Parallel" or "M-Distance" is selected and [OK] is pressed in the Measurement Item Setting dialog
Measure Error	Status display at the bottom left of the screen	Measurement	An invalid operation is performed during the measurement. Case 1: The system failed to obtain the intensity data in a measurement that requires the acquisition of intensity data. Þ 2D-Profile, Histogram, VelHist, ColorVelocity, ColorProfile, TIC, ACM
Measurement Error!	Error log	Test program	Failure in voltage measurement
MO (Still) Busy	Dialog	File Utility	Data cannot be saved on MO when the MO (Still) command is executed continuously.
Name is empty.	Dialog	Measurement Registration	1) [OK] is pressed in the Measurement Registration screen with no character string entered for "Name". 2) [OK] is pressed in the Measurement Item Setting dialog with no character string entered for "Name". 3) [OK] is pressed in the Calculation Regist dialog with no character string entered for "Name".
No file is selected.	Dialog	Measurement Registration	[OK] is pressed in the Measurement List dialog with no file selected.
NO ID	Dialog	Patient ID registration	No ID has been entered.
No item is registered.	Dialog	Measurement Registration	In the Measurement Registration screen, [OK] is pressed when no measurement items are registered.
No label is registered.	Dialog	Measurement Registration	1) In the Measurement item Setting dialog, [OK] is pressed when no labels are registered. 2) In the Measurement Registration screen, [OK] is pressed when no measurement labels or calculation labels are registered.
No LMP has been given.	Dialog	Report function	No LMP has been entered.
No Patient ID has been given.	Dialog	Report function	No patient ID has been entered.
No unit is selected.	Dialog	Measurement Registration	[OK] is pressed with no unit specified in the Unit dialog.
NoData!!	Trend graph	Report function	No plot data is available.
NoDGA!!	Trend graph	Report function	No LMP or patient ID has been entered.
NoID!!	Trend graph	Report function	No patient ID has been entered.
OHP Reverse	Dialog	SCSI Printer	The OHP sheet is reversed.
One Lamp Error!	Error log	Test program	One of the lamps below the monitor is dead.

Error message	Classification	Function	Description
PCNT: EEPROM Checksum Error	Error log	Test program	I/O port read error
Printer Busy or Device Not Found	Dialog	SCSI Printer	The SCSI device is not found.
Printing	Command line	SCSI Printer	The SCSI printer is printing.
PSEL: EEPROM Checksum Error	Error log	Test program	I/O port read error
Ready	Dialog	DMU	The DMU has started up and is ready for use (when the DMU is connected).
Reduce acoustic output power. Temperature can exceed limit. System will freeze image. Press "Override" switch to continue examination.	Dialog	TEE	The temperature has increased during use of the TEE transducer.
Reduce acoustic output power. Temperature can exceed limit.	Dialog	TEE	The temperature has increased during use of the TEE transducer.
Rename file, please.	Dialog	Measurement Registration	1) A file name identical to the one selected in the Copy, Upload, or Sample Copy operation exists in the registration information management file. 2) An identical file name exists in the registration information management file even after the file is renamed in case 1) or a file name is edited in the "Add" operation.
RXBF A: Register Read/Write Error	Error log	Test program	Register read/write error on the RXBF A
RXBF B: EEPROM Checksum Error	Error log	Test program	I/O port read error
RXBF B: Register Read/Write Error	Error log	Test program	Register read/write error on the RXBF B
SCSI Printer Busy	Dialog	SCSI Printer	The SCSI device does not respond.
Sheet Cassette Illegal	Dialog	SCSI Printer	An unacceptable ink sheet cassette is loaded.
Sheet Cassette Not Set	Dialog	SCSI Printer	An ink sheet cassette is not loaded.
Sheet End	Dialog	SCSI Printer	The printer ink sheet is used up.
Sheet Jam	Dialog	SCSI Printer	An ink sheet jam has occurred.
Shut down system immediately.	Dialog	TEE	The temperature has increased during use of the TEE transducer.
Something	Dialog	SCSI Printer	Unidentified error
Standard 5 V High Error!	Error log	Test program	Failure in calibration of the reference voltage for voltage monitoring
Standard 5 V Low Error!	Error log	Test program	Failure in calibration of the reference voltage for voltage monitoring
SUBC: EEPROM Checksum Error	Error log	Test program	I/O port read error
SUBC: RACS Run Error	Error log	Test program	Error in the operation of the local CPU on the SUBC
Syntax Error	Dialog	Measurement Registration	[OK] is pressed in the Calculation Regist dialog with incorrect syntax included in the edited formula.

Error message	Classification	Function	Description
SYSC: SDRAM Read /Write Error	Error log	Test program	File read/write error in the SDRAM on the SYSC
SYSC: SRAM Read/Write Error	Error log	Test program	File read/write error in the SRAM on the SYSC
SYSC: UFC ASIC Register Error	Error log	Test program	Register read/write error in the UFC ASIC on the SYSC
System has stopped ultrasound transmission. Approaching temperature limit.	Dialog	TEE	The temperature has increased during use of the TEE transducer.
TEE: Hazardous temperature can cause burn.	Error log	TEE	The specified temperature limit has been exceeded during use of the TEE transducer.
TEE: Shut down system immediately.	Error log	TEE	The specified temperature limit has been exceeded during use of the TEE transducer.
TEE: Temperature over limit.	Error log	TEE	The specified temperature limit has been exceeded during use of the TEE transducer.
Temperature Error!	Error log	Test program	Temperature within the Nemio system is too high.
Temperature over limit. System has stopped ultrasound transmission. Acoustic Cooling being performed.	Dialog	TEE	The temperature has increased during use of the TEE transducer.
The number of Measure Item must be under 12.	Dialog	Measurement Registration	When "Parallel" or "M-Distance" is selected and [OK] is pressed in the Measurement Item Setting dialog and then LV Type is selected (Distance of level 1 is added), the sum of the number of currently registered measurement items and the number of items to be registered exceeds 12.
The number of Measure Label must be under 32.	Dialog	Measurement Registration	When [OK] is pressed in the Measurement Item Setting dialog, the sum of the number of currently registered measurement labels and the number of labels to be registered exceeds 32.
This file already exists. Do you wish to overwrite the file?	Dialog	File Utility	Message warning against overwriting that is displayed when a directory or file with the same name exists.
TIME OUT	Status indicator at the bottom left of the screen	DMU	Communication timeout error. (This message is displayed only when preset.) This message is displayed for the alpha protocol only.
Two Lamps or Connection Error!	Error log	Test program	Two lamps below the monitor are dead, or the lamp switch is OFF.
Unit is empty	Dialog	Measurement Registration	[OK] is pressed in the Calculation Regist dialog with no unit specified.
Unusable Sheet	Dialog	SCSI Printer	An ink sheet that cannot be used has been detected.
Upper Voltage Error!	Error log	Test program	The voltage is above the specified upper limit.
View Change Error	AfxMessage Box	Report function	Failure in view switching. For debugging

40. Appendix (Product Info./ Service Info.)

Please contact with the proper section for those sales information update and confirmation.

Product Information (as of May '02)

Title	Reference No.
Systems Data for V3.0	MSDUS0016EAB (April 2002)
Product Information Change of specifications for V3.0 New Transducer release	MPIUS0225EA (April 6, 2002)
Product Information Change of specifications for V2.1 Image Recording to FD	MPIUS0225EA (January 29, 2002)
Product Information Sector Kit	MPIUS0225EA (September 17, 2001)

Service Information (as of May '02)

Title	Reference No.
Square dots on DMU screen	DSU60-472E
HDD drive assignment	DSU60-476E
DMU error TDICOM10	DSU60-480E
Nemio I/O ERR with VCR	DSU60-486E

TOSHIBA

DIAGNOSTIC ULTRASOUND SYSTEM

Systems Data
No. MSDUS0016EAB

Nemio

OUTLINE

- Nemio is a fully digital, Premium Compact class diagnostic ultrasound system which has following four key features, Premium performance, Advanced Application, Flexibility and Versatility.
- **Premium Performance**
  The fully digital platform gives high-resolution images with uniform image quality. In addition, the top-of-the-line dynamic range and high signal-top-noise ratio enable generation of clear images with high-contrast resolution.
- **Advanced Application**
  State-of-the-art techniques can be integrated, such as Fusion 3D (proposed by Toshiba as a new clinical value), Fetal 3D, Panoramic View, cardiovascular examination techniques including stress echo, TDI-Q, etc.
- **Flexibility**
  The Nemio system allows you to select an optimal configuration according to the clinical purpose such as B/W, abdominal color system, cardiovascular color system, In addition, a customizable panel and interface realize streamlined and flexible workflow.
- **Versatility**
  Expand your diagnostic capabilities through the latest applications for radiology, cardiology, OB/GYN, vascular and iternal medicine.
  Manage images and information more effectively through DICOM compliance and expanded data storage capabilities.

SYSTEM CONFIGURATION

30: Whole-body color system
20: Non-cardiac color system
10: B/W system

Nemio is a trademark of Toshiba Corporation, used for the diagnostic ultrasound system model SSA-550A.

SYSTEM MATRIX OF Nemio

NA: Not Applicable
○: Standard on some configurations
●: Standard on all configurations

No.	Unit	Model Name	Configuration			Remarks
			30	20	10	
1	Main Unit	SSA-550A	●	●	●	Including 511 frames IM for Nemio 30 and 127 frames IM for Nemio 20 and 10
		15-Inch Color Monitor	●	●		
		12-Inch B/W Monitor			●	
		FD drive			●	
		Peripheral Rack	●	●		For Color printer and VCR
		Printer Mounting Kit	●	●	●	For B/W printer
		Sector, Pencil CW	●			
		Color Doppler Imaging	●	●		
<Options for Main Unit>						
2	Reference Unit	UJUR-550B	●		*1	Disposable ECG cable and Reference signal unit for except USA.
		UJUR-551B	●		*1	Disposable ECG cable and Reference signal unit for USA.
3	Transducer Selector for CNN C	UIPS-550A				Add transducer connector for linear, convex and sector* transducer to 3rd port (* only for Nemio 30)
		UIPS-551A	●	NA	NA	Transducer connector for TEE and sector transducer to 3rd port
4	PSP for CDI	UIPC-550A	●			Add PSP and Sector capability
5	511 frames IM	UIME-550A	●		NA	For color system
		UIME-551A	NA	NA		For B/W system
6	PWD Unit	UIPW-550A	●	●		
7	HPRF unit	USHP-550A			NA	Up to 15.2kHz PRF for all transducers
8	MO Drive	UIMO-550A	●	●		Image filing and service
9	FD Drive	UIFD-550A	*3	*3	●	
10	THI Kit	USTH-550A	●	●	NA	THI kit only for Color system (standard configuration)
		USTH-551A	NA	NA		THI kit only for B/W system
11	DCA Kit	USDA-550A			NA	Add Directional Power Angio capability
12	TDI Kit	USTD-550A		NA	NA	
13	QSP Kit	UIQS-550A		*2	NA	Applicable transducer: PSM-20CT, PSM-25AT, PSM-37AT, PSM-37CT, PSM-50AT, PEF-510MA, PVM-375AT, PVF-381MT
14	CHI/FEI kit	USHI-550A			NA	Contrast Harmonic Imaging (CHI) and Flash Echo Imaging (FEI) for Color System.
		USHI-551A	NA	NA		Contrast Harmonic Imaging (CHI) and Flash Echo Imaging (FEI) for B/W System.
15	Dynamic Flow kit	USDF-550A			NA	Dynamic Flow works only on Color System.
16	TIC kit	USTI-550A			NA	Time Intensity Curve (TIC) measurement kit for Color System.
		USTI-551A	NA	NA		Time Intensity Curve (TIC) measurement kit for B/W System.
17	ACM kit	USAC-550A		NA	NA	Automated Cardiac flow Measurement kit. Recommended transducer is PSM-25AT
18	TEE Hanger	UAEH001A		NA	NA	
19	Foot SW	UZFS002A				
20	Annular kit	UIMC-550A	●	●	●	Kit for connecting the annular array transducer. The UIPS-550A is required. For Nemio 30, the UIPS-551A which has been installed in the standard configuration, must be removed.
21	Annular Array Transducer Stand	UZMK-550A	●	●	●	Arm and stand for holding the annular array transducer.

No.	Unit	Model Name	Configuration			Remarks
			30	20	10	
<Data Management Unit>						
	Data Management Unit	UIDM-550A	○		NA	Integrated Data Management Unit with filing software
	Expansion Memory	UDME-550A			NA	The memory capacity of the UIDM-550A is expanded from 256MB to 512MB.
	Fusion 3D	UDFR-551A			NA	The software for Fusion 3D without sensor
	Stress Echo	UDSE-550A		NA	NA	The software for Stress Echo examination
	DICOM	UDDS-550A			NA	The Software for DICOM capavility. Supported service class are; Storage SCU/SCP, Query/Retrieve SCU, Print SCU, MWM SCU, MPPS SCU.
	Panoramic View	UDPA-550A			NA	This software allows the user to obtain a greater field width by moving the transducer. This can be used for every transducer.
	Fetal 3D	UDFE-550A			NA	Easy-to-operate B/W 3D software for OB/GYN
	TDI-Q	UDTD-550A		NA	NA	The software for TDI, TDI-Quantification. The TDI Option Software (USTD-550A) is required for the main system of the Nemio
	Tele-Medicine	UDTM-550A			NA	This unit transmits and displays Nemio image to ecternal PC connected with Ethernet. External PC software is included.
	Reporting	UDSR-550A			NA	The software for creating reports
	ACT	UDAT-550A		NA	NA	
	ACM for DMU	UDAM-550A		NA	NA	Automated Cardiac flow Measurement. (software providing the same functions as the USAC-550A on DMU.)
<Upgrade Packages>						
	10 to 20 upgrade	UIUG-551A	NA	NA		Color, Doppler, etc. capabilities are added.
	20 to 30 upgrade	UIUG-550A	NA		NA	Sector transducer support are added.

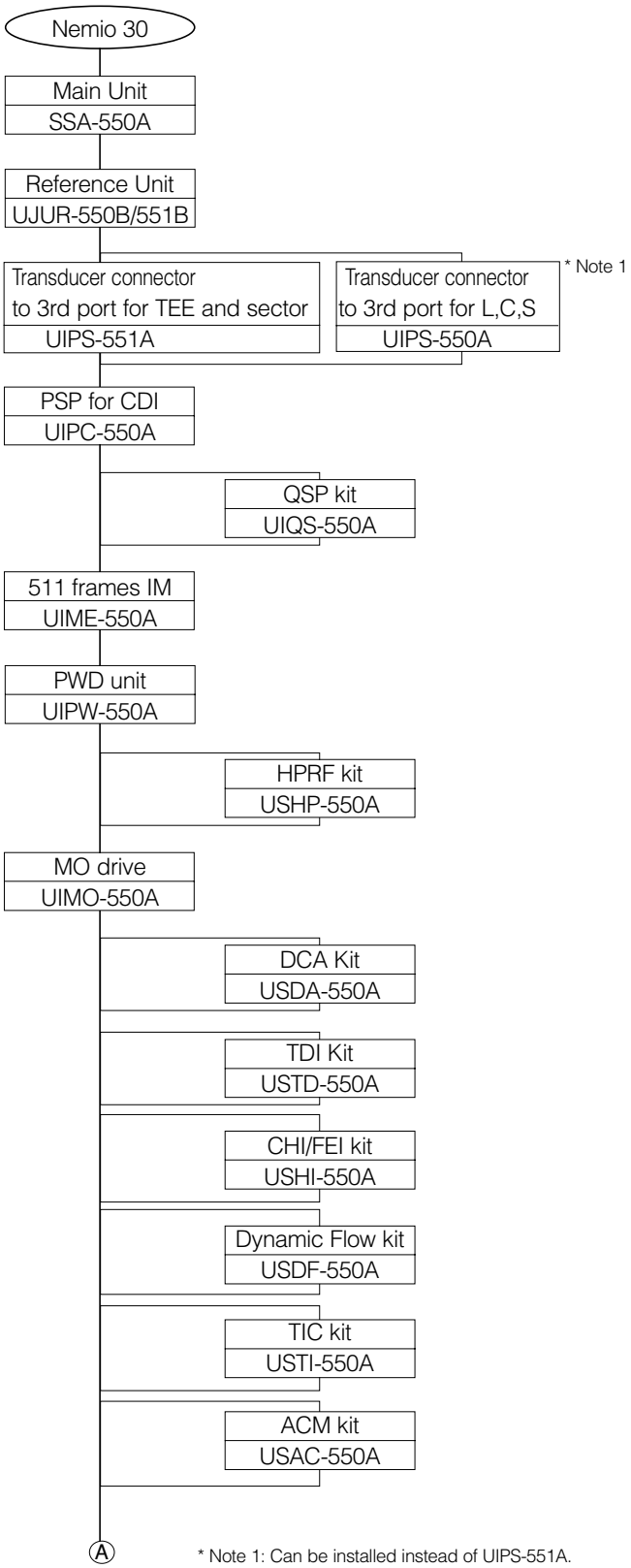
Note1: In case of Nemio 10 system, UIPW-550A is also required.
Note2: UIPC-550A is required.
Note3: The UIFD-550A and the UIDM-550A cannot be used together.

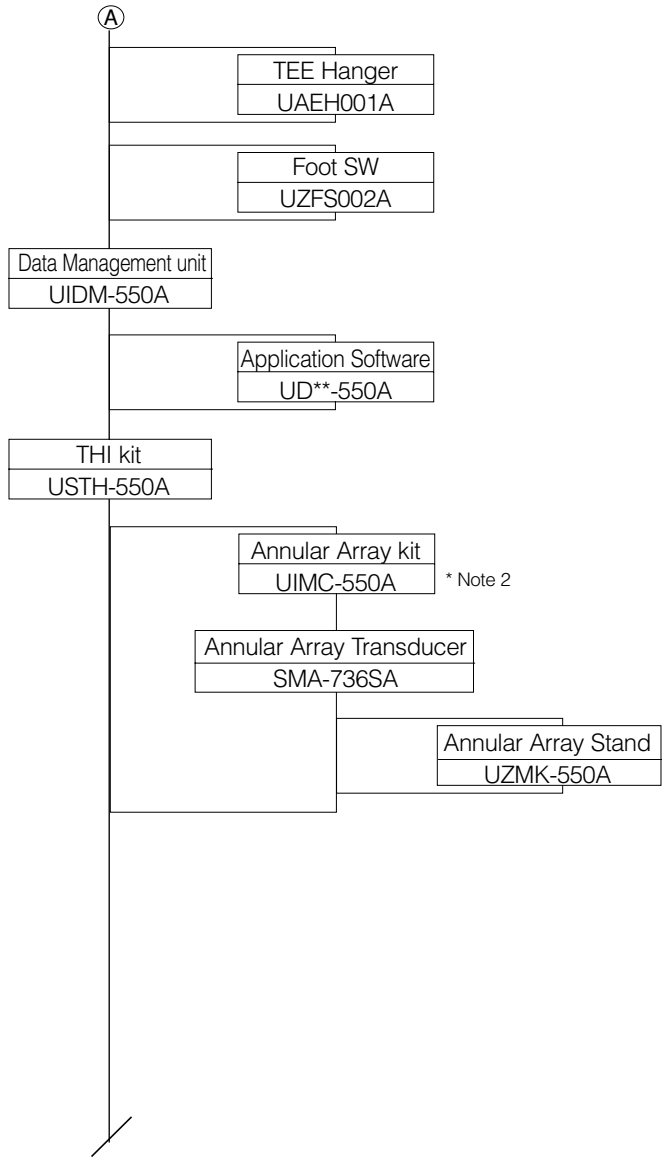
○: Applicable
Blank: Not Applicable

Model name	Scan type	Freq. (MHz)	Multi-freq. (MHz)		Applicable system			Application	Remarks
			B-mode	THI	30	20	10		
<Sector Transducer>									
PSM-25AT	Sector 90°	2.5	3.7/3.0/2.0	3.8/3.6	○			Heart	
PSM-37AT	Sector 90°	3.75	5.0/3.7/2.5	5.0/4.2	○			Heart	
PSM-50AT	Sector 90°	5.0	6.0/4.5/3.7		○			(Pediatric) Heart	
PSM-70AT	Sector 90°	7.0	10.0/7.5/5.0		○			Pediatric Heart	
PSM-37CT	Sector 90°	3.75	5.0/4.2/3.2	4.8/4.6	○			Abdomen	
PSM-20CT	Sector 90°	2.0	3.0/2.5/2.0	3.8/3.6	○			TCD	
<Convex Transducer>									
PVM-375AT	Convex 70°	3.75	6.0/4.2/3.0	5.0/4.6	○	○	○	Abdomen	
PVF-381MT	Convex 75°	3.75	6.0/3.7/3.0	4.8/4.6	○	○	○	Cardiac	
PVF-575AT	Convex 70°	5.0	6.5/5.0/3.7		○	○	○	Abdomen	
PVM-662AT	Convex 62°	6.0	8.0/7.0/5.7		○	○	○	Neonatal head	
<Linear Transducer>									
PLM-503AT	Linear 32 mm	5.0	8.5/7.2/6.0		○	○	○	Vascular	
PLM-703AT	Linear 32 mm	7.5	11.0/9.0/6.0		○	○	○	Peripheral Vascular	
PLM-805AT	Linear 56 mm	8.0	12.0/9.0/6.0		○	○	○	Small parts	
PLM-1204AT	Linear 32 mm	12.0	14.0/12.0/8.0		○	○	○	Small parts, breast	
PLM-1202S	Linear 25 mm	12.0	14.0/12.0/8.0		○	○	○	MSK, Intraoperative	
PLF-308P	Linear 85 mm	3.75	5.0/4.0/3.0		○	○	○	Abdomen (Biopsy)	

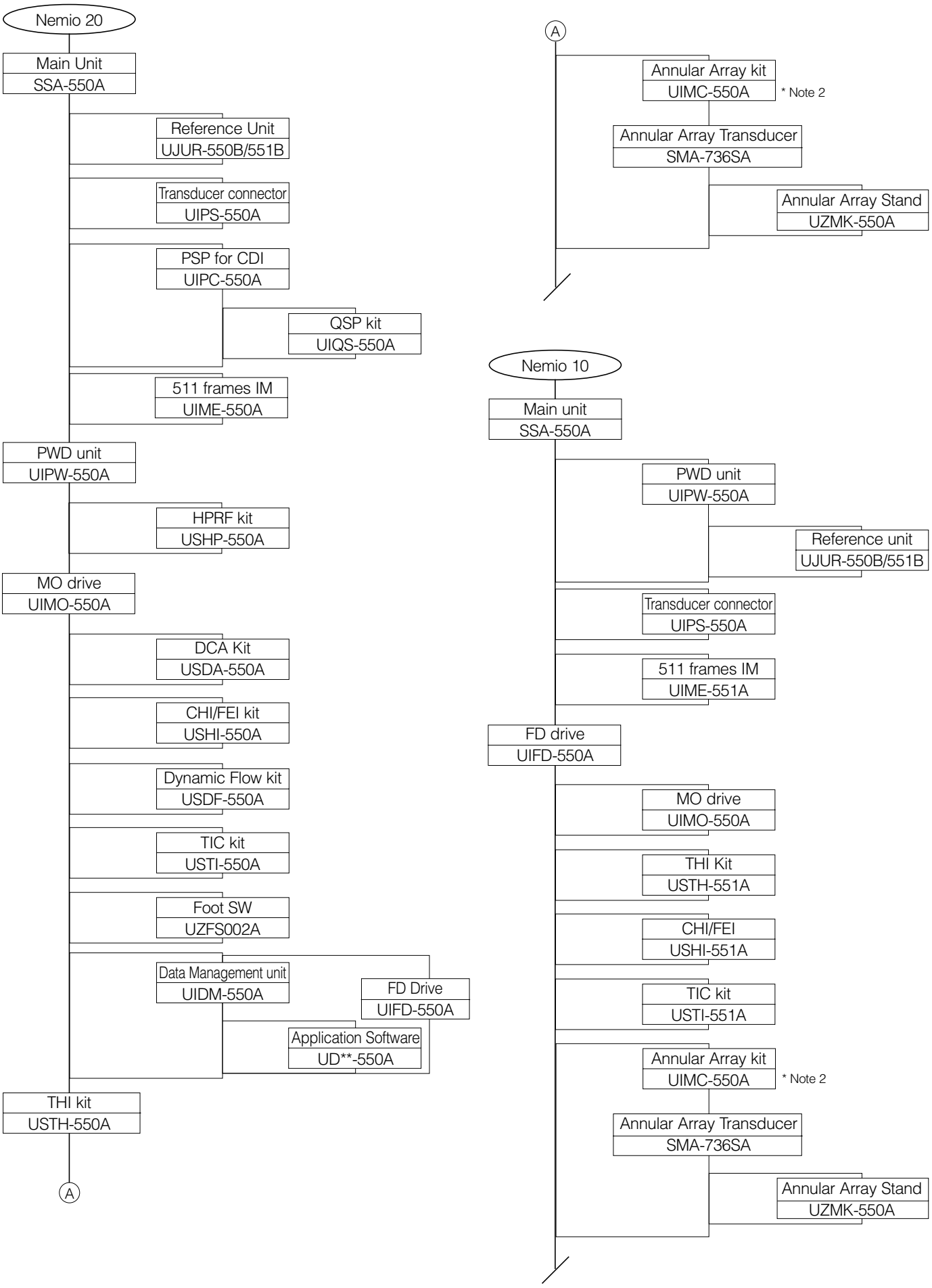
Model name	Scan type	Freq. (MHz)	Multi-freq. (MHz)		Applicable system			Application	Remarks
			B-mode	THI	30	20	10		
<Transesophageal Transducer>									
PEF-510MA	Sector 90°	5.0	6.0/5.0/3.7		○			Heart	
PEF-510MB	Sector 90°	5.0	6.0/5.0/3.7		○			Heart	Mainly for USA
PEM-508SC	Sector 90° /Sector 90°	5.0	7.0/5.5/4.0		○			Heart	
<Pencil Transducer>									
PC-19M	Pencil	1.9	–		○			Heart	
PC-50V	Pencil	5.0	–		○			Peripheral Vascular	
<Endocavity Transducer>									
PVF-620ST	Convex 143°	6.0	7.5/6.0/4.0		○	○	○	Endocavity	
PVM-621VT	Convex 144°	6.0	7.5/6.0/4.5		○	○	○	Ob/gyn	
PVM-651VT	Convex 143°	6.0	7.5/6.0/5.0		○	○	○	Ob/gyn	
PVM-740RT	Convex/ Convex 144°	7.0	10.0/7.5/5.0		○	○	○	Urology (Biplane)	
PVL-715RT	Linear 55 mm	7.0	12.0/9.0/6.0		○	○	○	Urology (Biplane)	
	Convex 140°	7.0	10.0/7.5/5.0		○	○	○	Urology (Biplane)	
<Intraoperative Transducers>									
PVF-738H	Convex 32°	7.0	10.0/7.5/5.0		○	○	○	Intra-operative	
PVF-738F	Convex 32°	7.0	10.0/7.5/5.0		○	○	○	Intra-operative	
PVF-745V	Convex 38°	7.0	10.0/7.5/5.0		○	○	○	Intra-operative	
<Endoscopic ultrasound transducer>									
PEF-708FA	Convex 100°	7.5	10.0/7.5/5.0		○	○	○	Endoscopic	Not Available in USA Fujinon Light source PS2-HS is needed.
<Laparoscopic transducer>									
PVM-787LA	Convex 85°	7.0	10.0/7.5/5.0		○	○	○	Laparoscopic	
PEF-704LA	Linear 34 mm	7.0	10.0/7.5/5.0		○	○	○	Laparoscopic	
<Annular Array transducer>									
SMA-736SA	Mechanical Sector 40°	7.5	10.0/8.0/6.0		○	○	○	Superficial Orthopedics	CDI is not available

BLOCK CHART OF Nemio SYSTEMS





* Note 1: Can be installed instead of UIPS-551A.
* Note 2: The UIPS-550A is required.


Nemio 20
Main Unit
SSA-550A
Reference Unit
UJUR-550B/551B
Transducer connector
UIPS-550A
PSP for CDI
UIPC-550A
QSP kit
UIQS-550A
511 frames IM
UIME-550A
PWD unit
UIPW-550A
HPRF kit
USHP-550A
MO drive
UIMO-550A
DCA Kit
USDA-550A
CHI/FEI kit
USHI-550A
Dynamic Flow kit
USDF-550A
TIC kit
USTI-550A
Foot SW
UZFS002A
Data Management unit
UIDM-550A
FD Drive
UIFD-550A
Application Software
UD**-550A
THI kit
USTH-550A
A
A
Annular Array kit
UIMC-550A
* Note 2
Annular Array Transducer
SMA-736SA
Annular Array Stand
UZMK-550A
Nemio 10
Main unit
SSA-550A
PWD unit
UIPW-550A
Reference unit
UJUR-550B/551B
Transducer connector
UIPS-550A
511 frames IM
UIME-551A
FD drive
UIFD-550A
MO drive
UIMO-550A
THI Kit
USTH-551A
CHI/FEI
USHI-551A
TIC kit
USTI-551A
Annular Array kit
UIMC-550A
* Note 2
Annular Array Transducer
SMA-736SA
Annular Array Stand
UZMK-550A

SPECIFICATIONS

System

- Transducer: M-series with Echo Booster (Chip-in-the-Tip)
- Focusing: Autofocusing with Digital Continuous Beam Former of ROI-tracing type

2D- and M-modes

- Scanning methods: Electronic convex array
  Electronic linear array
  Electronic sector array
  Annular array
- Scan width: WIDE (100%)/MEDIUM (70%)
  NARROW (50%)/FREE (Min. 20°)
- 2D
  - Depth: 2 to 24 cm, 1-cm steps
  - Line density: L, H
  - Independent steering angle: ±10° max.
  - Multiple frequencies: Max. 5
- M-mode
  - Channel: Single
  - Display: 1, 2, 4, 8 s/screen
  - Display method: Moving bar
- Focusing
  - Transmission: 8 steps max.
  - Reception: Continuous
- Gain adjustment
  - Palm controller: 62 to 100 dB for B-mode
    52 to 110 dB for M-mode
  - STC (DGC): 8-step sliding VR's.
    Corresponds to the viewing depth
- Image processing: 5 IP types are available.
  The following parameters can be controlled.
  - Dynamic range: 30 to 90 dB
  - Edge enhancement: OFF, 1, 2, 3
  - Automatic gain control: 4 types
  - Postprocessing: 2D, 8 types
  - Temporal smoothing: OFF, 1 to 5
  - Spatial smoothing: 4 types
  - Contrast enhancement: OFF, ON
- Tissue Harmonic Imaging: Two frequencies
- Frame rate: max. 292 frames/sec

Spectrum Doppler (SD)

- Mode: Pulsed-Wave Doppler (PWD),
  Continuous-Wave Doppler with Pencil Transducer, Full Steerable Continuous-Wave Doppler (SCWD)
- Pulse repetition frequency (PRF): 1.3 to 12.5 kHz, PWD
  5.8 to 15.2 kHz, HPRF (USHP-550A is required)
  4.0 to 47.6 kHz, CWD
- Gain: –14 to 16 dB (2 dB steps)
- Doppler filter: PWD, 7 steps
  CWD, 7 steps
- Sampling width: 1 to 15 mm (7 steps)
- Display control: Reverse (toward/away flow) display, Base shift, B-refresh (Manual, Time, ECG-Sync), D-expand, 2D/D-expand, Angle mark
- Independent steering angle: ±20° max. (2 steps)
- Audio stereo output
- Display format: 2D+SD(vertical layout, horizontal layout)
  SD
- Auto adjustment: Base shift, Velocity Range
- Real time Auto trace: Available

Color Doppler (CDI)

- Display mode: Velocity-Variance (3 types)
  Power (4 types)
  Directional Power (4 types) (USDA-550A is required)
  Power variance (1 type)
  Variance (1 type)
  Velocity HUE (4 types)
  Velocity SATURATION (3 types)
  Color-reversed
  Color contrast (4 steps)
  TDI HUE (2 types, option)
  QUANT (1 type)
- Region of interest (ROI) steering angle: ±20° max.
- Velocity range (scale)
  The following parameters can be changed with one dial.
  - No. of color data : L/M/H
  - PRF: 1.3 to 12.5 kHz
  - Color filter: 4 types
  - Motion eliminator: 4 types
- Gain: 1 to 16 dB
  0.5-dB steps
- Display format: CDI, CDI/CDI
  CDI+MCDI
  MCDI
- Image processing: Programmable image quality adjustment function; for
  Time Smooth (3 types),
  Spatial Smooth (5 types)
- Display control: Base shift, Color contrast, B/W and color balance, CDI ROI, Reverse

- Independent steering angle: ± 20° max (2 steps)
- Color density: L/M/H/SH
- Frame rate: Max. 376 frames/se (UIPC-550A is requied)

Dynamic Flow (USDF-550A is required)

- Applicable Transducers: PVM-375AT, PLM-1204AT PLM-703AT, PSM-25AT PSM-37CT, PSM-20CT

CHI/FEI (USHI-550A or USHI-551A is required)

- Injection Timer: Available
- Mode: 2D, Power, Dynamic Flow (USDF-550A is required)
- Flash Triger: Mannal, Internal, ECG
- Multiple Flash: 1–15
- Monitor Mode: Available
- Applicalble Transducers: PSM-20CT, PVM-375AT, PSM-37CT, PSM-25AT

Acoustic output power adjustment

- B/M, Doppler and Color
  - Doppler Output: 16 steps max. (varies according to transducer)
  - Auto gain control: Automatic gain compensation for lower acoustic output power setting

Display

- Gray scale level: 256
- Format
  - B/M scan: 2D (dual 2D), 2D/M, M
  - Doppler (D-mode): 2D, 2D/M/D, 2D/D, M/D, D
  - Color Doppler: CDI (dual CDI), CDI/MCDI CDI/MCDI/D, MCDI, MCDI/D, 2D/CDI
- Observation monitor: 15-inch VGA color monitor
- PAN/ZOOM (EXPAND)
  - ZOOM (EXPAND) method: Real-time/ROI specified (selected using the preset only)
  - Images for ZOOM (EXPAND): Real-time images and FREEZE images
  - Magnification factor: Up to a viewing field of 2 cm
  - PAN method: Real-time images, FREEZE images and IM images
  - Images for PAN: Real-time images, FREEZE images, and IM images
  - Other types of control: The transmission focus is optimized. EXPAND for real-time images optimizes the number of rasters.
- Others: Display reversal: Left-Right, Top-Bottom, 90°-step rotation.

Reference signal

This function provides reference signal display and ECG trigger mode in single mode.
This mode requires the reference signal unit UJUR-550B or 551B.

- Signal: ECG (Lead II, External IN) PCG
- ECG Trigger: 1 channel
- PCG Filter: 3 steps available
- ECG syncronization setting: 0 to 1.94 s

Image memory

- Memory capacity
  - Black-and-white systems: 8 MB (2D mode) + 4 MB (M mode) + 4 MB (D mode)
  - Color systems: 8 MB (2D mode) + 4 MB (M mode) + 4 MB (D mode) + 16 MB (CDI mode)
- No. of images that can be recorded
  - 2D-mode: Up to 511 images (in case of Nemio 20, UIME-550A is required) (in case of Nemio 10, UIME-551A is required)
  - CDI-mode: Up to 255 images (in case of Nemio 20, UIME-550A is required)
  - M-mode MCDI-mode PWD/CWD-mode: Up to 128 sec

Measurement

- B-mode: Distance (8 ch), angle (8 ch), area (8 ch), circumference (8 ch), volume (1 ch), cross distance (8 ch), parallel distance (8 ch), and hip joint (8 ch)
- M-mode: Distance (8 ch), time (8 ch), slope (8 ch), heart rate (1 ch)
- Doppler: Velocity (8 ch), time (8 ch), acceleration (8 ch), heart rate (1 ch), velocity trace (8 ch)

Application software (calculation, measurement, etc.)

- Calculation of left ventricular (LV) function

Mode	Method
2D-mode	Single-plane, Biplane, Bullet, Modified Simpson, Cube
M-mode	Cube, Teichholz, Gibson

- Measurement of mitral valve (MV) function: M-mode
- Measurement of aortic valve (AV) function: M-mode

- Doppler:
  Valve orifice area measurement
  Pressure gradient measurement
  Flow volume measurement
  PI (Pulsatility Index) measurement
  Ratio measurement
- Obstetric calculations:
  – Up to 16 items can be measured, including fetal growth, gestational age, estimated delivery date, etc.
  – Trend graph function
- Report items: Patient ID, measurement data, comment

Input/Output

- Transducer connector: Electronic, up to 3 transducers
  1 transducer (pencil)
- Composite output signals
  – Color: 1
  – B/W: 1
- S-VIDEO input/output
  – Input: 2
  – Output: 2
- RGB input/output
  – Input: 1
  – Output: 2
- VGA
  – Input: 1
- Printer control signal
  – Output: 2
- Audio input/output
  – Input: R+L
  – Output: R+L
- RS-232C: 3 ports
  VCR control
  Report communication interface
  Interface with the data management unit
- Ethernet: 10Base-T 1
  100Base-T 1
  (UIDM-550A is required)
- SCSI: 1

Recording

- MOD image filing unit
- HDD image filing (UIDM-550A is required)
- Video cassette recorder (VCR)
- Color video printer
- B/W video printer

VCR

- Recommended S-VHS VCR models
  – Sony: SVO-9500MD [NTSC]
  SVO-9500MDP [PAL]

B/W Printer

- Recommended B/W printer models
  – Sony: UP-895MD
  – Mitsubishi: P91W

Color Printer

- Recommended color printer model
  – Mitsubishi: CP-770DW

OPERATIONG CONDITIONS

- Power Supply Requirements
  – Line voltage: 97.75VAC to 132.25VAC (50Hz)
  97.75VAC to 139.7VAC (60Hz)
  195.50 VAC to 250VAC
  – Line frequency: 47 Hz to 63Hz
  – Power capacity: 1050VA (max.)
- Environmental Conditions
  – Operating conditions
  · Ambient temperature: 10°C to 35°C
  · Relative humidity: 35% to 85% (no condensation)
  · Atmospheric pressure: 700 hPa to 1060hPa
  – Storage and transportation conditions
  · Ambient temperature: -10°C to 55°C
  · Relative humidity: 30% to 85% (no condensation)
  · Atmospheric pressure: 700 hPa to 1060hPa
- Safety Classification
  – According to the type of protection against electric shock:
  CLASS I EQUIPMENT
  – According to the degree of protection against electric shock:
  EQUIPMENT WITH TYPE-BF APPLIED PARTS
  – According to the degree of protection against harmful ingress of water:
  Ordinary EQUIPMENT (enclosed EQUIPMENT without protection against ingress or water)
  – According to the degree of safety of application in the presence of a FLAMMABLE ANESTHETIC MIXTURE WITH AIR or WITH OXYGEN OR NITUOUS OXIDE:
  EQUIPMENT not suitable for use in the presence of a FLAMMABLE ANESTHETIC MIXTURE WITH AIR or WITH OXYGEN OR NITROUS OXIDE
  – According to the mode of operation:
  CONTINUOUS OPERATION

CONFORMANCE STANDARDS

- General: IEC60601-1 (1988), AMD No.1 (1991), AMD No.2 (1995)
- Flammability: UL544 (1998)
- Acoustic power: Information for Manufactures Seeking Marketing Clearance of Diagnostic Ultrasound Systems and Transducers (1997)

DIMENSIONS, MASS, AND POWER CONSUMPTION

Unit	Model Name	External Dimensions, mm (in)			Mass, kg (lb) (approx.)	Power consumption (VA) (approx.)
		Width	Height	Depth		
SSA-550A	Nemio 30 Nemio 20	480 (18.5)	1,390 (54.7)	790 (31.1)	125 (276)	1050 (max.)
	Nemio 10	470 (18.5)	1,320 (52.0)	790 (31.1)	115 (253.8)	

Made for Life

TOSHIBA CORPORATION
MEDICAL SYSTEMS COMPANY
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TOSHIBA
TOSHIBA CORPORATION
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Product Information
US

No.: MPIUS0225EA
Date: April 8, 2002

Issued by: Takashi Yanagawa
Senior Manager
Ultrasound Department

Changes in Nemio specifications and release of new transducers

The specifications for Nemio systems (SSA-550A) have been changed in part from April 2002. As a result, the software version has also been upgraded from V2.1 to V3.0.

The main changes are described below.

- Addition of transducers

  The following transducers can be connected.

  - PVM-787LA New laparoscopic transducer (details given later)
  - PEF-704LA Linear laparoscopic transducer
  - PVM-621VT Endovaginal transducer
  - PEM-508SC Pediatric biplane TEE transducer
    (can be connected to the B/C connector of Nemio 30)
  - SMA-736SA Annular array transducer (details given later)

- Addition of the annular array transducer option kit
- Addition of transducers for CHI/FEI (option)
- Addition of transducers for Dynamic Flow
- Support of output of DMU screens to VCRs and printers
- Support of automatic entry of the condition code at the time of remeasurement using VCR images
- Support of LVDS connection to the DMU (option)
- Support of the spool function for SCSI printer output (option)

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1. Addition of transducers

(1) The following transducers, which are already available, can be connected.

PEF-704LA	Linear laparoscopic transducer Multifrequency value: 10.0/7.5/5.0 MHz
PVM-621VT	Endovaginal transducer Multifrequency value: 7.5/6.0/4.5 MHz
PEM-508SC	Pediatric biplane TEE transducer Multifrequency value: 7.0/5.5/4.0 MHz (can be connected to the B/C connector of the Nemio 30)
SMA-736SA	Annular array transducer (details given later) Multifrequency value: 10.0/8.0/6.0 MHz

(2) Release of the new laparoscopic transducer PVM-787LA

The PVM-787LA is an ultrasound transducer for use in laparoscopic surgery.

The current PEF-704LA is a linear "side-firing"-type of laparoscopic transducer, while the new PVM-787LA is a convex "end-firing"-type of laparoscopic transducer. The PVM-787LA is expected to be particularly useful in biopsy procedures.

Major specifications:	Frequency value	7 MHz
	Multifrequency value	10.0/7.5/5.0 MHz
	Field-of-view angle	Approximately 85°
	Insertion section length	350 mm
	Insertion section external diameter	Maximum 14.8 mm
	Transducer length	550 mm
	Mass	Approximately 1.0 kg

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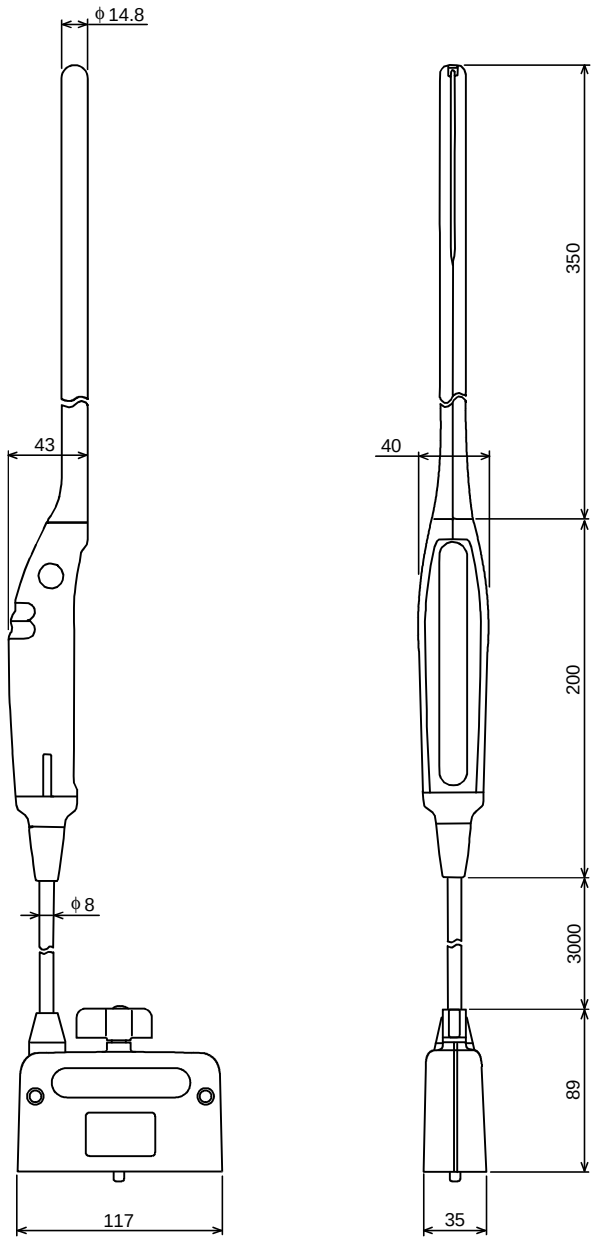
External appearance:



(Unit: mm)

PVM-787LA

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2. Annular array transducer options

The annular array transducer SMA-736SA can be connected by using the following options. Note that only systems shipped as V3.0 support this transducer. Systems that have been upgraded to V3.0 do not support it.

Transducer connector	UIPS-550A (C connector only)		
Annular kit	UIMC-550A (new option)		
	Composition:	RTTC PWB	1 set
		Nameplate, manual	1 set
Annular stand	UZMK-550A		
	Composition:	Stand	1 set
		Mounting parts	1 set
		Nameplate, manual	1 set

Major specifications of the annular array transducer

- Scanning method Mechanical sector scanning
- Mode

  2D (THI/CHI/Hi-Frame not supported)
  2D-Dual
  M + 2D (real-time display of M + 2D together not supported)
  M
- Transmission focus 8 types (combinations cannot be used)
- Reception focus Continuous focus (made possible by the use of 12 rings)

3. Addition of transducers supporting the CHI/FEI (option)

When the USHI-550A/USHI-551A is installed, the contrast function is enabled in the following transducers.

PSM-20CT
PVM-375AT
PSM-37CT (new)
PSM-25AT (new)

4. Addition of transducers supporting Dynamic Flow (option)

When the USDF-550A is installed, Dynamic Flow is enabled in the following transducers.

PVM-375AT
PLM-703AT
PSM-37CT (new)
PSM-20CT (new)
PLM-1204AT (new)
PSM-25AT (new)

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5. Output of DMU screens to VCRs and printers

The DMU screens displayed when [APPLI] is ON can be output to VCRs and printers.

6. Automatic entry of the condition code at the time of remeasurement using VCR images

The condition code displayed on the image is recorded on the VCR tape and this code is displayed as the initial value on the code input screen at the time of remeasurement using VCR images.

7. Digital connection to the DMU (option)

When the option kit specified below is added, LVDS (*1) connection with the DMU is possible (same interface as that used in PowerView and PowerVision).

(*1) LVDS = Low Voltage Differential Signaling

Model name	:	UIDK-551A
Applicable systems	:	Nemio 30/20 shipped as V3.0 or later. Also, UIDM-550A (*2) systems supporting LVDS.
Composition	:	ECDX3 PWB 1 set Nameplate, manual 1 set

(*2) The model names of the DMUs supporting LVDS are given below.

UIDM-550A/E3 (200-V system)
UIDM-550A/A3 (100-V system)

8. SCSI printer spool function (option)

When the UIDK-551A option kit above is installed, up to 8 images (only images in the Nemio main system, not DMU images) can be spooled for output to the SCSI printer.

9. Upgrade of delivered products

Delivered products can be upgraded using the following kits. Note, however, that the upgraded system does not support the annular array transducer SMA-736SA.

(1) Software upgrade

The software version is upgraded to V3.0.

Model name	:	USBU-552A For Nemio 30/20 (MO disk) USBU-553A For Nemio 10 (floppy disk)
Applicable systems	:	SSA-550A with V1.5 or later
Composition	:	MO disk or floppy disk 1 set Nameplate, manual 1 set

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(2) Hardware upgrade

For the following items, the hardware upgrade kit specified below is required in addition to the software upgrade kit USBU-552A/USBU-553A.

- Output of DMU images to VCR and printers
- Automatic entry of the condition code at the time of remeasurement using VCR images
- LVDS connection to the DMU (note)
- SCSI printer spool function (note)

(Note) For these two functions, the option kit for systems shipped as V3.0 and for systems upgraded to V3.0 are different.

Model name	UIDK-550A	
Applicable systems	Nemio (SSA-550A) with V2.1	
Composition	ECDC3 PWB	1 set
	ECDX3 PWB	1 set
	Rear panel	1 set
	Nameplate, manual	1 set

Note that DMUs (UIDM-550A systems) that do not support LVDS require the following upgrade kit.

Model name	UDDK-550A	
Applicable systems	UIDM-550A systems that do not support LVDS	
Composition	System MO disk	1 set
	Video capture board	1 set
	Cable	1 set
	Nameplate, manual	1 set

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Appendix: Comparison of upgrades for SSA-550A

	Version at the time of shipment		
	V2.0 or earlier	V2.1	V3.0
Addition of transducers Addition of transducers for CHI/FEI Addition of transducers for Dynamic Flow	USBU-552A or USBU-553A	USBU-552A or USBU-553A	Not required
Support of annular array transducer	Cannot be supported	Cannot be supported	UIPS-550A UIMC-550A (UZMK-550A)
Output of DMU screens to VCRs and printers	Cannot be supported	UIDK-550A USBU-552A	Not required
Automatic entry of the condition code at the time of remeasurement using VCR images	Cannot be supported	UIDK-550A USBU-552A or USBU-553A	Not required
LVDS connection to the DMU	Cannot be supported	UIDK-550A USBU-552A	UIDK-551A
Spool function for SCSI printer output	Cannot be supported	UIDK-550A USBU-552A or USBU-553A	UIDK-551A

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TOSHIBA
TOSHIBA CORPORATION
MEDICAL SYSTEMS COMPANY

Product Information
US

No.: MPIUS0220EAA
Date: January 29, 2002

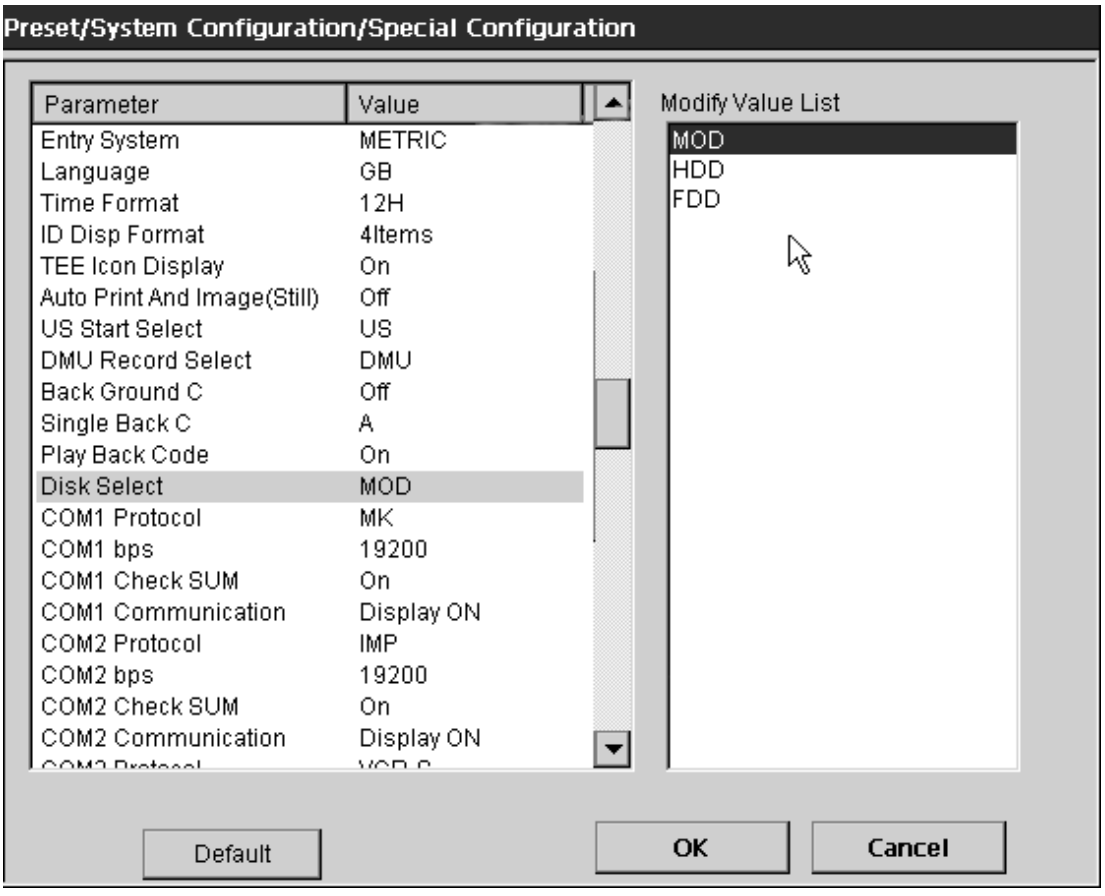
Issued by: Takashi Yanagawa
Senior Manager
Ultrasound Department

GENERAL INFORMATION REGARDING NEMIO V2.1

The specifications for Nemio systems have been changed in part from January 2002, and the recording of images on FD is now supported. As a result, the software version has been upgraded from V2.0 to V2.1.

1. Recording Images on FD

When the recording destination is specified as FDD in the preset menu, images can be recorded using the FDD. The image format can be selected as BMP or JPEG in the same way as for recording using the MOD.



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2. Restrictions

The FD drive unit UIFD-550A is included as standard in the Nemio 10, which is a B/W system. In the Nemio 20, which is a color abdominal system, this unit can be installed as an option, but it cannot be installed together with the Data Management Unit UIDM-550A.

Therefore, the FD drive unit cannot be used in a Nemio 20 system in which the UIDM-550A has already been installed. In addition, the FD drive unit cannot be installed in Nemio 30 because the UIDM-550A is included as standard.

3. Applicable Serial Numbers

This specification change applies to S/N 1623416 or later.

4. Upgrade Kit

An upgrade kit supporting this specification change is not available.

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TOSHIBA CORPORATION
MEDICAL SYSTEMS COMPANY

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US

No.: MPIUS0212EA
Date: September 17, 2001

Issued by: Takashi Yanagawa
Senior Manager
Ultrasound Group

SECTOR KIT FOR NEMIO SYSTEMS

Previously, it was necessary to upgrade Nemio 10 (for B/W diagnosis) or Nemio 20 (radiology color system) to Nemio 30 using the UIUG-551A or UIUG-550A in order to use a sector transducer in those systems. As a result of system re-evaluations, we have verified that the sector function can be added using the UIPC-550A (PSP kit for CDI).

The UIPC-550A allows a sector transducer to be connected (sector images can be displayed) and PSP to be used in CDI (only for Nemio 20). For Nemio 10, note that the 10 to 20 upgrade kit UIUG-551A is required in order to add Doppler and color functions.

In addition, there are no limitations in combinations related to the production dates of the UIPC-550A and the Nemio main system. The sector function can be added to all Nemio 10 and 20 systems that have already been delivered.

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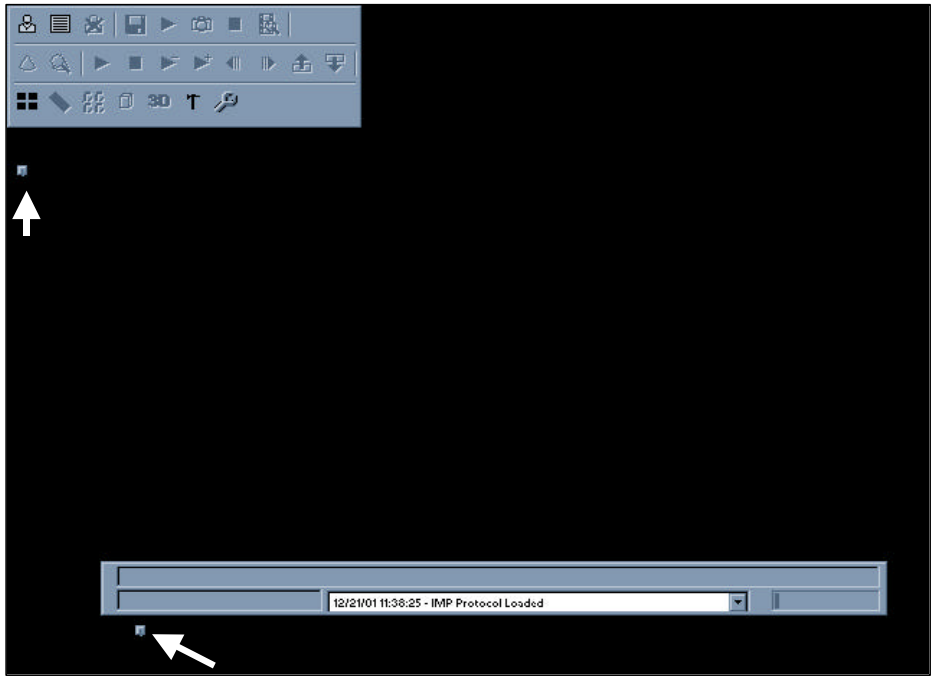
Applicable system :

UIDM-550A : DMU (Data Management Unit) for Nemio (SSA-550A)
UIDM-400A : PowerView for PowerVision 6000 and for PowerVision 8000
No specific serial number range

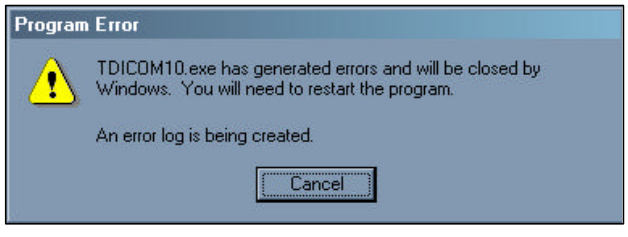
Problem descriptions :

It is not clearly know why, but as you can see below picture-1, there are some small square dot(s) appears at random position on DMU (Application) screen.
As the reason why this dot(s) start appearing, it may appear some time after installation.
Except this dot, DMU operation is normal.
However, if you click this dot, the DMU will be hung-up with the error message shown on picture-2.

<picture-1>



<picture-2>


Program Error
TDICOM10.exe has generated errors and will be closed by Windows. You will need to restart the program.
An error log is being created.
Cancel

After getting this error, it is no longer to access DMU.
Select APPLI switch off.
Nemio operation is okay without DMU hung-up.
Turn off the system by Nemio power switch.

When power switch is off, there will be usual shut-down message appears at first.
Then the another message appears ;

CAUTION
DMU shutdown error.
System is turned off in 5 minutes.

Countermeasure :

The abnormal dot(s) will be disappeared by deleting particular registry file in DMU.
As it is risky to access registry file, please follow the following instructions and do not delete some other registry files by mistake.
Also, the following procedure will clear only DMU screen display format basically, but for safety, please back-up some important user data, and also un-install DMU optional software beforehand.

1 Preparation
External Keyboard
External Mouse
Remove rear cover to see DMU PC inside to access PC power switch afterwards.
Remove front cover by removing only one screw. (bottom of front cover is fixed by "magic tape" strongly.)
Refer to service manual for those mechanical dis-assembly procedures.
At the system front side, you can find DMU PC rear side. So that remove standard Keyboard and Mouse connectors and connect External Keyboard and External Muse to the proper connectors on DMU PC rear.

Also prepare MO disk.

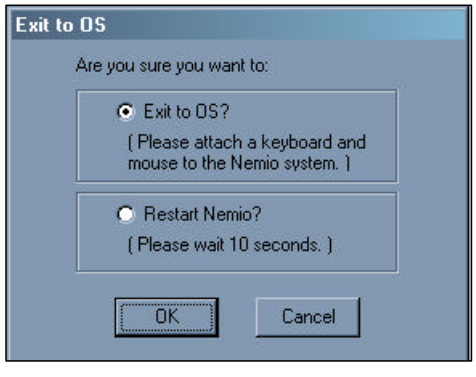
2 Turn on Nemio.
After boot-up, select [APPLI] switch.
Now DMU can be operated by External Keyboard and External mouse.
Select hummer mark on TOOL BAR. Select Configuration Utility.
Select [SERVICE] then key-in "pc-ws" as a password to enter Service menu.

If optional software were installed, un-install those options by INSTALL/UNINSTALL.
For the procedures for un-installation, you of course need the original optional software key MO (or FD).
Un-install all optional software accordingly.

If any important patient data in HDD, we also recommend you back-up those data into MO disks. Those patient data will be not deleted by the following process, but as usual (not only for this case but generally speaking), it is better back-up those user data into MO disks for safety back-up.

Select [EXIT TO OS]
The following (picture-3) message will appear. Select [OK] to exit to the Windows OS.

<picture-3>

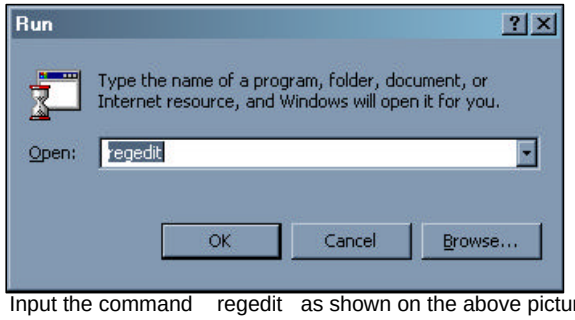

Exit to OS
Are you sure you want to:
Exit to OS?
(Please attach a keyboard and mouse to the Nemio system.)
Restart Nemio?
(Please wait 10 seconds.)
OK
Cancel

As the DMU screen will be initialized, if tool bars are customerized by customers, it will be better you remember the original screen layout.
You may simply print out, but as Nemio DMU screen cannot be print out except recommended SCSI color printer, you may also record the screen by the following way.

a) On DMU screen (before exit to OS), press [Alt] and [Print Screen] keys.
b) Exit to OS, select START - PROGRAM - ACCESSORY - PAINT to open paint.
c) Press [Ctrl] and [V] for paste. (or select paste from menu.) Insert MO disk into right MO disk
Note for MO format for DMU. If MO disk is nor readable by DMU, format MO disk by MO FORMAT in Configuration Utility menu.
d) Now the screen copy is pasted on Paint.
e) Select FILE - Save As.. , then select Removable Media (means MO Drive)
Save the original DMU screen into MO disk.

3 Registry file delete

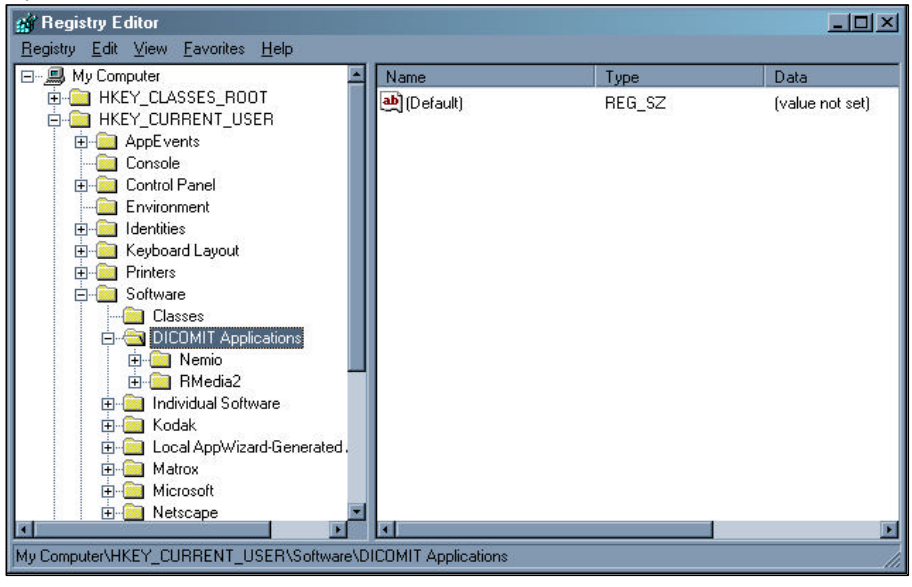
Select [START] - [RUN]
<picture-4>



Input the command regedit as shown on the above picture-4.
Press [OK]

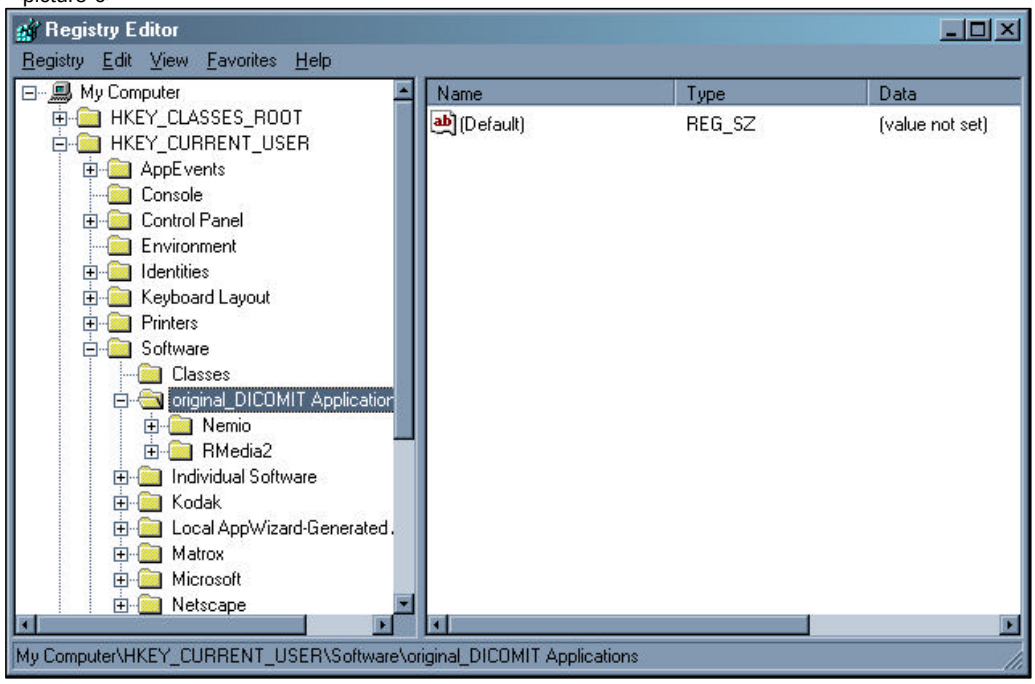
Now the registry files are open.
Find HKEY_CURRENT_USER \ Software \ DICOMIT Applications (see picture-5)

<picture-5>



If the above DICOMIT Applications directory will be simply deleted, the default DICOMIT Application directory will be automatically made during next DMU boot-up. However, just for safety back-up, We recommend you to keep original DICOMIT Applications directory by Renaming the directory name. Below example by renaming "original DICOMIT Applications". (picture-6)

<picture-6>



Exit the Registry.
Select [START] - [Shutdown]
DMU PC will be shut-down.
When DMU PC is shut-down, there is no video signal going to observation monitor, so that you will see the message NO SIGNAL on TV screen, but don't care.
Push DMU PC power switch at the back side of the Nemio (because PC front is in Nemio rear side.)
Wait for DMU boot-up until you will see the DMU screen.
Now DMU screen layout is returned to the original default conditions. And there must be no abnormal dot(s) shown on the above picture-1 earlier.
Check Patient data in the patient list for sure that patient data remains. Open some of those data and check for any abnormalities.

Install all optional software which were un-installed earlier stage.
Setup Tool bar layout.

If the above are okay, it is not necessary to keep the "original DICOMIT Application" folder in registry. Go to the Registry file again.
Now under HKEY_CURRENT_USER, Software directory, "DICOMIT Applications" directory is automatically made by the above DMU rebooting.
There is also "original DICOMIT Applications" directory which is the original file having that abnormal dot(s).
If DMU function is okay, move the courser on "original DICOMIT Applications", right click and delete it.

January 10,2002
S.Enjoji

HDD drive assignment

1. Outline

When you change HDD , Drive assign may be different from the normal order(F: MO drive etc). Please change Drive setting according to this instruction.

2. Applicable unit All SSA-770A (Aplio) (or Nemio DMU UIDM-550A)

3. Drive reassign procedure

(1) Open Service menu.

(2) Select [Command Line] and execute Explorer.

(3) Select [Control Panel] and [Administrative Tools]

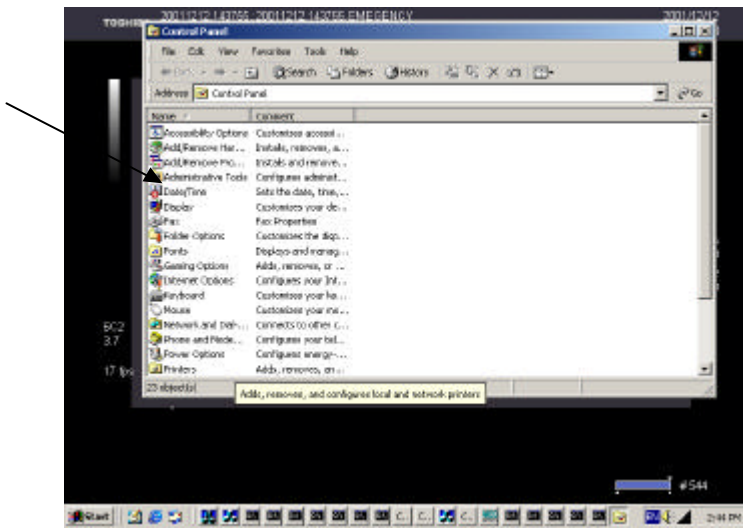


Figure 1

(4) Select [Computer Management(Local)].

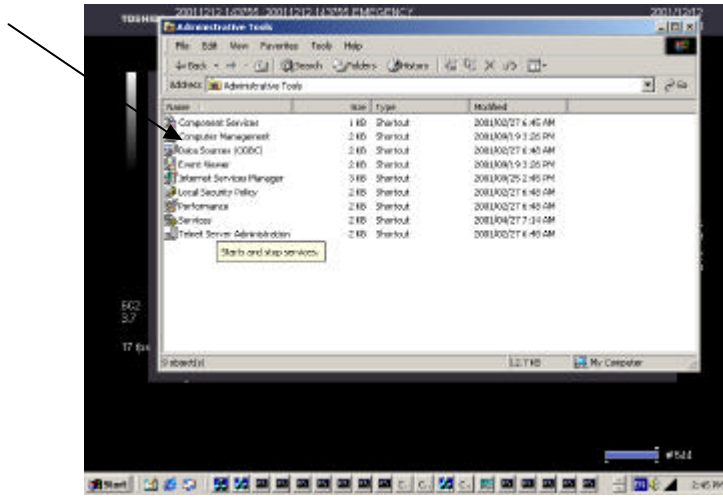


Figure 2

(5) Select [Disk Management].

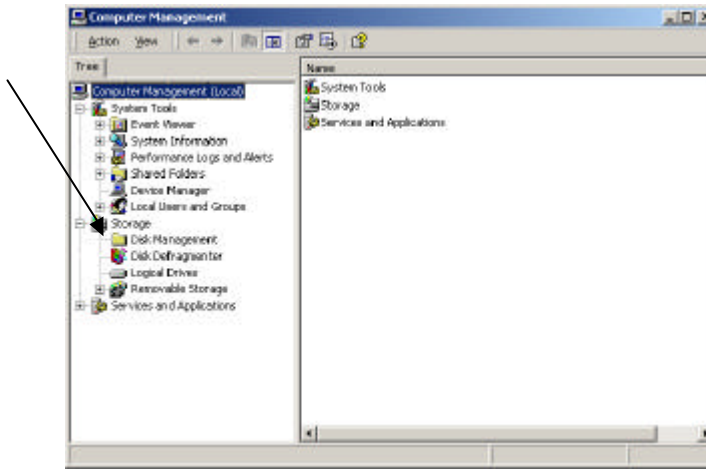


Figure 3

(6) Select the drive which you want to change. Open Action menu and change the drive to the designate one. Because you cannot assign the drive as the same one, please assign a drive not in use once and change related drives sequentially.

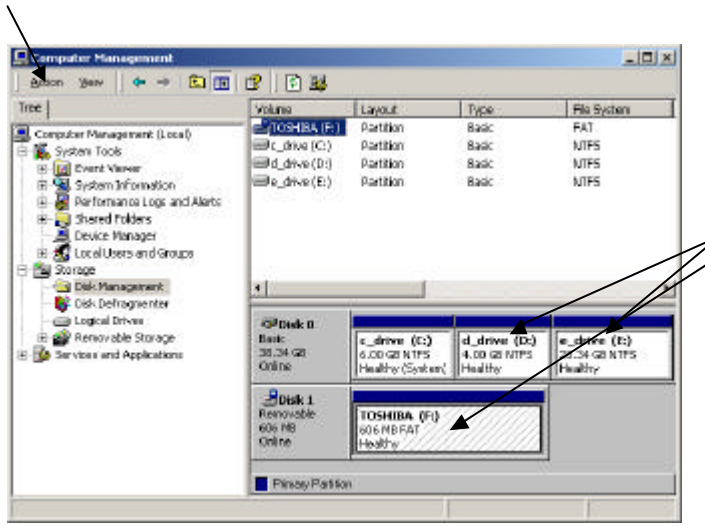


Figure 4

For example

In case D drive is assigned to MO drive, change the drive to “I “drive which is not in use at first. Please do the same step (E->D, F->E) and change I to D finally. Close the Computer Management.

(7) Close Explorer.

Nemio DMU (UIDM-550A) error TDICOM10

[QUESTION]

DMU hung-up with error message TDICOM10 as shown below.

Program Error
TDICOM10.exe has generated errors and will be closed by Windows. You will need to restart the program.
An error log is being created.
Cancel

[OUTLINE]

TDICOM10.exe is a kind of DMU application software.
If this error occurs, DMU application will be hung-up.

[CHECK POINTS]

At first, Back-up the data by the procedures shown on page 4/6 ~ 5/6 which are extracted from DMU Service manual 2D708-038E.
It will be better back up all the data shown.
The procedures on pages 4/6 explains back-up patient data by Patient List, or use Windows Explorer to save some files if DMU application is not working
It is same idea for system back-up shown on file page 5/6.
However, we recommend you save files by both way just for safety purpose.

We also recommend you un-install optional software before the following works just for safety purpose.
However, technically speaking, those optional software can be installed into particular DMU unit. If option software will be gone before un-installation by some kind of troubles, it is still possible to use same MO disks for re-installation " as far as this is the same DMU from the last installation.

1. We knew the case announced by service information DSU60-472E with some square dots on DMU screen.
   Refer to DSU60-472E and check if your case is the same or not.

2. We also experienced that this error occurs due to the corrupted DICOMIT configuration file. Do the following.

   Under C drive on DMU, you can find Dicomita directory (as same as PowerView), and inside Dicomita, you can find "DICOMIT.CFG" and "dicomit.Org.cfg".
   (this is also same as PowerView)
   Change name of DICOMIT.CFG to keep user original dicom configuration
   (such as re-name “usr_dicomit.cfg”) then copy dicomit.Org.cfg, then paste it inside the same directory, change the copy of dicomit.Org.cfg to "DICOMIT.cfg".
   So that you will be able to clear DICOMIT.CFG. (if you need user dicomit.cfg back, re-name user_dicomit.cfg to DICOMIT.CFG.)

3. If the above will not fix the problem, then we recommend you re-install DMU application software.
   There are 2 ways to re-install DMU application software depends on the DMU application version.
   You can check the version by ; Check toolbar - Hammer mark - About.
   Then you can also find back-up MO disk for DMU software labeled ;
   Software : UIDM-550A System Disk
   Version V1.00..

   Below 2 procedures depends on the software versions.

3-1. If version is V1.0
   Remove all probes.
   Remove front cover - only one screw at the upper part of front cover.
   (below two points are fixed by "magic tape" tightly ; just pull it.)
   Find mouse and keyboard connectors. Remove internal ones originally connected and connect external mouse and keyboard supplied with the system.
   Turn on the system.
   Select APPLI switch on Nemio to display DMU screen after boot-up.
   Set Write protect for MO disk.
   Insert MO disk)(or CD-ROM) into right side MO disk.
   (left side is also okay, but right one is basically for DMU)
   Select Utility in tool bar - Configuration - (password : pc-ws) - select service - EXIT TO OS.
   (or Enter [Ctrl]+[Alt]+[Delete] to start the task manager and terminate the TDICOM10 application)
   Start Windows Explorer, select (CD-ROM or) Removable Disk [E:] (means MO) , and double-click .
   You can find "APP" directory. open APP directory and select all files - copy..
   then select C drive, (right click) COPY.
   (This means copy all the files / directory under "APP" directory in MO disk to DMU "C" drive.)
   Overwrite all the files and directory.
   Remove the system software disk from the drive.
   Select DMU application "Nemio" from the start bar.
   After DMU application starts, de-select APPLI switch. Turn off the system.
   Restart the SSA-550A

3-2. if version is V1.1 or V1.2 (or later)

Remove all probes.
Remove front cover - only one screw at the upper part of front cover.
(below two points are fixed by "magic tape" tightly ; just pull it.)
Find mouse and keyboard connectors. Remove internal ones originally connected and connect external mouse and keyboard supplied with the system.
Turn on the system.
Select APPLI switch on Nemio to display DMU screen after boot-up.
Set Write protect for MO disk.
Insert MO disk)(or CD-ROM) into right side MO disk. (left side is also okay, but right one is basically for DMU)
Select Utility in tool bar - Configuration - (password : pc-ws) - select service - EXIT TO OS.
(or Enter [Ctrl]+[Alt]+[Delete] to start the task manager and terminate the TDICOM10 application)
Start Windows Explorer, select (CD-ROM or) Removable Disk [E:] (means MO) , and double-click .

You can find "UpV12" directory (or UpV11). open this directory and find batch file named ; UpV11.bat (or UpV12.bat). Double click this batch file.
Installation will be started.
During installation, there will be the message on page 6/6 may appear : saying
Windows 2000 hotfix setup... [OK]
This is the message regarding red-code virus.

Select OK to continue. Then proceed further software Installation according to the messages.
The installation will be finished with-in a few seconds.
Remove the system software disk from the drive.
Select DMU application "Nemio" from the start bar.
After DMU application starts, de-select APPLI switch. Turn off the system.
Restart the SSA-550A

If all the above will not fix the problem, we recommend you replace the whole DMU unit.
Contact field support group Japan for further action.

3.3.4 Data backup

(1) Using the backup function of the application software

Place the test MO in the MO drive and copy the files to the MO.

It is possible to use the copy function of the application software installed in the system.

Note that if no problems are found in operational checks after work is completed, it is not necessary to restore the backup files.

No.	Operating procedures and window display	Checks
	Data backup procedures - Using the copy function of the application software Click the Patient List button on the toolbar. Select the study to be saved and click the Send button. Select "**MOD Drive**".	

(2) Using Windows Explorer

If the system application cannot be started up, use Windows Explorer. In this case, also back up the following file. The backup file must be restored together with the data.

"**C:\Dicomit\db\tpatient.mdb**"

Note that if no problems are found in operational checks after work is completed, it is not necessary to restore the backup files.

No.	Operating procedures and window display	Checks
	Data backup procedures - Using Windows Explorer Launch Windows Explorer. Copy all of the files in the following directories to the MO. **D:\Images** **D:\Advanced** **D:\Measure** Copy the following file to the MO. **C:\Dicomit\db\tpatient.mdb**	

3.3.5 System configuration backup

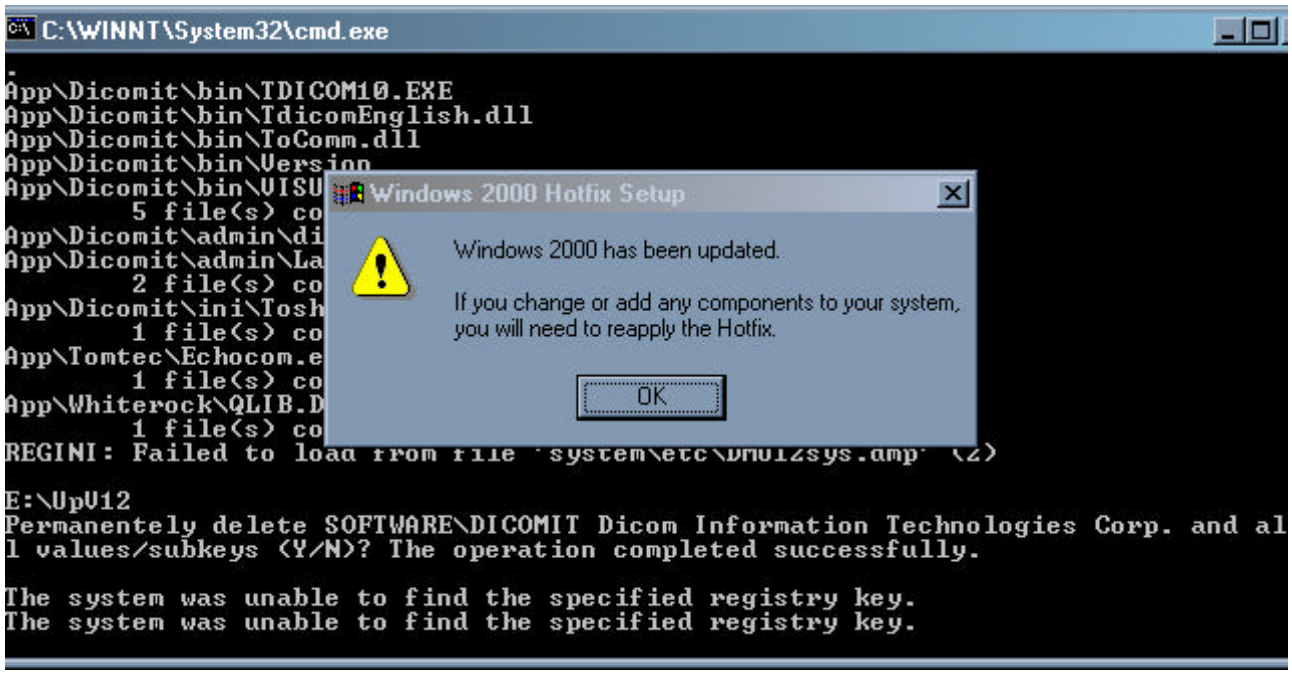
Perform the following procedures to back up the settings of the system.

No.	Operating procedures and window display	Checks
	Backup of the system settings Click [Utilities] on the toolbar of the main menu and select "Configuration Utility". Click Service and enter the utility password [pc-ws]. Place a formatted MO into the MO drive and click Backup.	

If the system application cannot be started up, use Windows Explorer to copy the following files to the MO.

c:\dicomita\dicomit.cfg
c:\dicomit\ini\ToFile.cfg
c:\dicomit\ini\Toshiba.cfg
c:\dicomit\dtk\dtk32.mdb
c:\winnt\system32\drivers\etc\Lmhosts
c:\tomtec*.ecp (all files with extension "ecp")
c:\tomtec*.dct (all files with extension "dct")

Note that if no problems are found in operational checks after work is completed, it is not necessary to restore the backup files.


C:\WINNT\System32\cmd.exe
App\Dicomit\bin\TDICOM10.EXE
App\Dicomit\bin\TdicomEnglish.dll
App\Dicomit\bin\ToComm.dll
App\Dicomit\bin\Version
App\Dicomit\bin\VISU
5 file(s) co
App\Dicomit\admin\di
App\Dicomit\admin\La
2 file(s) co
App\Dicomit\ini\Tosh
1 file(s) co
App\Tomtec\Echocom.e
1 file(s) co
App\Whiterock\QLIB.D
1 file(s) co
REGINI: Failed to load from file 'system\etc\DH012sys.dmp' (2)
E:\UpV12
Permanentely delete SOFTWARE\DICOMIT Dicom Information Technologies Corp. and al
l values/subkeys (Y/N)? The operation completed successfully.
The system was unable to find the specified registry key.
The system was unable to find the specified registry key.
Windows 2000 Hotfix Setup
Windows 2000 has been updated.
If you change or add any components to your system, you will need to reapply the Hotfix.
OK

Nemio (SSA-550A) EXT settings for RGB/S-V1/S-V2 and I/O ERR

1. When non-recommended VCR is connected on Nemio via COM3 RS-232C port, the "I/O ERR" may appear.

   If I/O ERR appears, change the following setting.

   [Preset D..] -> [Preset] -> [System Configuration] -> [Shift] + [<] -> [Special Configuration]
   Find COM3 Protocol : It is set to VCR-S as a default, change to "Other".

2. In pull-down menu "other", you can find EXT setting to select video signal.
   However, EXT settings does not exists in the preset menu because of the following.

   a) There is no specific device recommended with S-V2 terminal.

   b) In case if any of S-V2 or RGB must be used, you can select each via pull down.

   c) In case if the certain device is usually used after boot-up, connect such major video device with S-V1 which is default setting.

   d) Unfortunately, it is not possible to set RGB or S-V2 in the User Function keys.

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